



**RGC** TEN

OPERATORS MANUAL

# **WARNING**

## **ADHERE STRICTLY TO THESE AND ALL OTHER SAFETY INSTRUCTIONS AND GUIDELINES!**

## **WARNING**

### **2.**

- 01. PLEASE READ AND UNDERSTAND ALL INSTRUCTION MANUALS BEFORE USE.**
- 02. The Eclipse Ego10 is not a toy. PAINTBALL SAFETY RULES MUST BE FOLLOWED AT ALL TIMES.**
- 03. Careless or improper use, including failure to follow instructions and warnings within this User Manual and attached to the Ego10 could cause death or serious injury.**
- 04. Do not remove or deface any warnings attached to the Ego10.**
- 05. 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. Proper protection must be worn during assembly, cleaning and maintenance.**
- 06. Never shoot at a person who is not wearing proper protection.**
- 07. Never look directly into the barrel of the marker. Accidental discharge into the eyes may cause permanent injury or death. Never look into the barrel or breech area of the Ego10 whilst the marker is switched on and able to fire.**
- 08. Keep the Ego10 switched off until ready to shoot.**
- 09. Treat every marker as if it is loaded and ready to fire.**
- 10. The electronic on/off is the markers safety, always switch off the marker when not in use.**
- 11. Always fit a barrel-blocking device to the Ego10 when not in use.**
- 12. Always remove all paintballs from the Ego10 when not in use on the field of play.**
- 13. Never point the Ego10 at anything you do not intend to shoot.**
- 14. Do not shoot at persons at close range.**
- 15. Do not field strip or remove any parts while the marker is pressurised.**
- 16. Do not fire the Ego10 without the bolt in the breech, as high-pressure gas will be emitted.**
- 17. Do not fire the Ego10 without the bolt pin locked securely in place.**
- 18. Never put your finger or any foreign objects into the paintball feed tube of the Ego10.**
- 19. Never allow pressurised gas to come into contact with any part of your body.**
- 20. Always remove the first stage regulator and relieve all residual gas pressure from the Ego10 before disassembly.**
- 21. Always remove the first stage regulator and relieve all residual gas pressure from the Ego10 for transport and storage.**
- 22. Always follow guidelines given with your first stage regulator for safe transportation and storage.**
- 23. Always store the Ego10 in a secure place.**

# WARNING

## ADHERE STRICTLY TO THESE AND ALL OTHER SAFETY INSTRUCTIONS AND GUIDELINES!

- Persons under 18 years of age must have adult supervision when using or handling the Ego10.
- 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 any other compressed gas or pressurised liquid including CO<sub>2</sub>.
- Always follow instructions, warnings and guidelines given with any first stage regulator you use with the Ego10.
- Use 0.68 calibre paintballs only.
- 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.
- Any installations, modifications or repairs should be carried out by a qualified individual at a licensed and insured paintball facility.



### 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 mode d'emploi, demandez conseil à un expert.



### ESTE MANUAL DE USUARIOS (OPERARIOS) USARIOS ESTÁ EN INGLÉS.

Contiene importantes normas de seguridad e instrucciones. Si no está 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 unsicher sein, oder den Inhalte dies Heftes nicht verstehen, lassen Sie sich bitte von einen Experten beraten.

**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 CENTRES PAGE 72-73)

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTRES

PARTS LIST

SPARES & ACCESSORIES

INDEX

# WARNING

3.



## 6 ORIENTATION

Names the component parts of the Ego10 Marker. This section is essential reading for everyone.

- 6 > KNOW YOUR EGO10
- 7 > ECLIPSE SHAFT 3 BARREL
- 8 > INLINE REGULATOR
- 9 > LOW PRESSURE REGULATOR
- 10 > EGO10 SOLENOID ASSEMBLY
- 11 > EGO10 BOLT ASSEMBLY
- 12 > THE EGO10 NAVIGATION CONSOLE
- 13 > OPERATIONAL OVERVIEW

## 14 QUICK SET-UP

Details on how to get up and running quickly with your Ego10. This section is essential reading for everyone.

- 15 > INSTALLING A 9V BATTERY
- 16 > SWITCHING ON THE EGO10
  - > SWITCHING OFF THE EGO10
  - > FIRING THE EGO10
  - > THE EGO10 CIRCUIT BOARD
- 17 > USING THE BREAK BEAM SENSOR SYSTEM

## 18 USING YOUR EGO10

More detailed information on how to use and interact with the Ego10 via its user interface.

- 18 > SETTING UP
  - > INSTALLING A PRESET AIR SYSTEM
- 19 > T-SLOT MOUNTING SYSTEM
  - > MACROLINE HOSE AND ELBOWS
- 20 > INSTALLING AN ADJUSTABLE AIR SYSTEM
- 21 > ATTACHING A LOADER
- 22 > SETTING THE TRIGGER
- 24 > ADJUSTING THE VELOCITY
  - > ADJUSTING THE LPR PRESSURE
- 25 > USER INTERFACE
  - > RUN SCREEN LAYOUT
- 26 > THE BBSS INDICATOR
  - > THE AUX OUT INDICATOR

- 27 > THE SOUND INDICATOR
  - > THE TRIGGER DETECTION INDICATOR
- 28 > THE LOCK INDICATOR
  - > THE BATTERY LEVEL INDICATOR
  - > THE GAME TIMER
  - > THE SHOT COUNTER
- 29 > THE ACTUAL RATE OF FIRE
  - > THE PEAK RATE OF FIRE
  - > THE MENU SYSTEM

## 30 MENU TREE

A quick reference guide to the user interface.

## 34 ADVANCED SET-UP

In depth information on setting up the Ego10.

- 34 > ACCESSING THE MENU SYSTEM
  - > MOVING AROUND THE MENUS
  - > ALTERING PARAMETERS
- 35 > THE MAIN MENU
- 36 > PRESET -The Preset Menu
  - > LOAD -The Load Preset Parameter
  - > SAVE -The Save Preset Parameter
- 37 > FIRE MODE -The Fire Mode Parameter
  - > ROF CAP -The Rate of Fire Cap Parameter
  - > BS ON ROF -The Maximum Rate of Fire Parameter
  - > BS OFF ROF -Rate of Fire With BBSS Off Parameter
- 38 > RAMP SETUP -The Ramp Set-up Menu
  - > TYPE -The Ramp Type Parameter
  - > RATE -The Linear Ramp Rate Parameter
- 39 > SEMI SHOTS -The Ramp Start Parameter
  - > KICK IN -The Ramp Kick-In Parameter
  - > SUSTAIN -The Sustain Rate Parameter
  - > RESTART -The Ramp Restart Parameter
  - > TIMING -The Timing Menu
- 40 > DWELL -The Dwell parameter
  - > FSD COMP -The First Shot Drop-off Compensation Parameter
  - > FSD DLY -The First Shot Drop-off Delay Parameter
  - > FILTER -The Filter Menu

- 41 > **DEBOUNCE** -The Debounce Parameter
- > **EMPTY** -The Breech Empty Time Parameter
- > **FULL** -The Breech Full Time Parameter
- > **PULL TM** -The Trigger Pull Time Parameter
- > **RELEASE TM** -The Trigger Release Time Parameter
- > **PULL PT** -The Trigger Pull Point Parameter
- > **RELEASE PT** -The Trigger Release Point Parameter
- 42 > **BASIC TRIGGER FILTER SET-UP**
- > **ADVANCED TRIGGER FILTER SET-UP**
- > **HARDWARE**-The Hardware Menu
- 43 > **TRIGGER** -The Trigger Parameter
- > **SOUND** -The Sound Parameter
- > **TONES** -The Tones Parameter
- > **BACKLIGHT** -The Backlight Parameter
- > **RED LEVEL** -The Backlight Red Level Parameter
- 44 > **GRN LEVEL** -The Backlight Green Level Parameter
- > **BLU LEVEL** -The Backlight Blue Level Parameter
- > **AUX OUT** -The AUX Out Parameter
- > **DBL-CLICK** -The Double Clicking Parameter
- > **AUTO OFF** -The Auto Off Parameter
- 45 > **TRAINING** -The Training Parameter
- > **CLOCK** -The Clock Menu
- > **TIME** -The Time Parameter
- > **DATE** -The Date Parameter
- 46 > **SHOT COUNT** -The Shot Count Menu
- > **GAUGE** -The Gauge Parameter
- > **GAUGE MAX** -The Gauge Max Parameter
- 47 > **TIMER** -The Game Timer Menu
- > **GAME** -The Game Timer Parameter
- > **ALARM** -The Alarm Parameter
- > **START** -The Start Parameter

## 48 MAINTENANCE

A guide to performing routine maintenance.

- 48 > **CLEANING THE BREAK BEAM SENSOR SYSTEM**
- 50 > **CLEANING THE INLINE REGULATOR**
- 52 > **CLEANING THE LOW PRESSURE REGULATOR**
- 54 > **MAINTAINING THE RAMMER**
- 56 > **CLEANING AND LUBRICATING THE BOLT**
- 57 > **REMOVING THE FRAME**
- 58 > **ATTACHING THE FRAME**

- 59 > **THE EGO10 TRIGGER ASSEMBLY**
- 61 > **THE EGO10 SOLENOID ASSEMBLY**
- 63 > **REMOVING THE VALVE ASSEMBLY**
- 66 > **THE EGO10 ON/OFF PURGE SYSTEM**

## 68 FAULT FINDING

Information on how to resolve any problems that might arise with your Ego10.

## 72 SERVICE CENTRES

Information on the location of your nearest Ego10 Service Centre.

## 74 PARTS LIST

A table of components that make up the Ego10.

## WARRANTY CARD

Tear-out product registration card to be completed and returned. Alternatively register online at [www.planeteclipse.com](http://www.planeteclipse.com)

## 78 SPARES & ACCESSORIES

Available upgrade / repair kits for your Ego10.

## 80 INDEX

Ego10 Manual Index

## QUICK GUIDE

### CONTENTS

#### ORIENTATION

#### QUICK SET-UP

#### USING YOUR EGO10

#### MENU TREE

#### ADVANCED SET-UP

#### MAINTENANCE

#### FAULT FINDING

#### SERVICE CENTRES

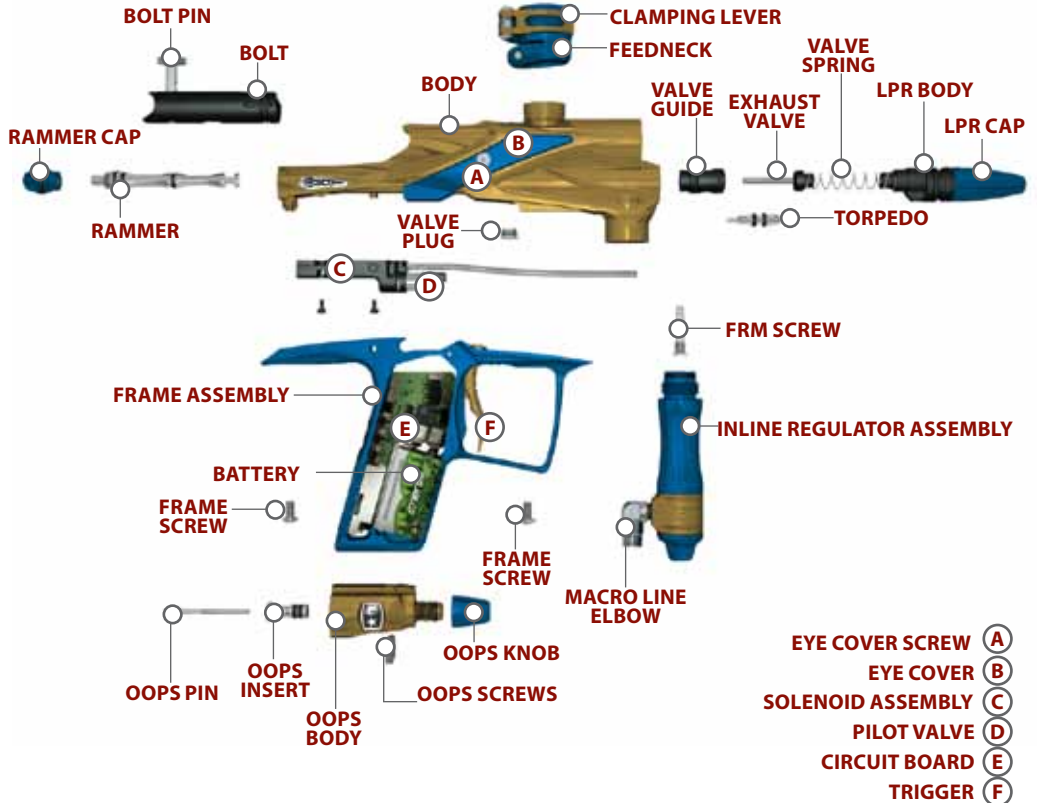
#### PARTS LIST

#### SPARES & ACCESSORIES

#### INDEX

# CONTENTS

# KNOW YOUR EGO10



## ORIENTATION

# ECLIPSE SHAFT 3 BARREL

**NOTE:** THE BORE SIZE OF YOUR SHAFT 3 MAY VARY ACCORDING TO THE MODEL OF EGO10 YOU HAVE.

Your Eclipse Ego10 comes as standard with an Eclipse Shaft 3 barrel.

The barrel screws into the body of the Ego10 using a right hand thread meaning that if you hold the Ego10 pointing away from you the barrel screws into the body in a counter-clockwise direction.

The barrel comprises of two parts, a barrel back **A** and a barrel front **B**. The two parts are joined together with a left hand thread meaning that if you hold the barrel, with the back nearest you, the front unscrews in a counter-clockwise direction. The bore size of the barrel back is engraved at the end of the barrel back **C**.

On the barrel back there is a 016 NBR 70 o-ring **D** which prevents the barrel from vibrating loose from the Ego10 body when the marker is fired. There is also a 015 NBR 70 o-ring on the barrel front **E** helps with alignment when the two sections are screwed together.

Replace and lubricate these o-rings with Eclipse Grease as necessary.



**NOTE:** THE EGO10 WILL ONLY ACCEPT COCKER THREADED BARRELS. DO NOT USE ANY OTHER TYPE OF BARREL THREAD.

## QUICK GUIDE

CONTENTS

**ORIENTATION**

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# ORIENTATION

7.



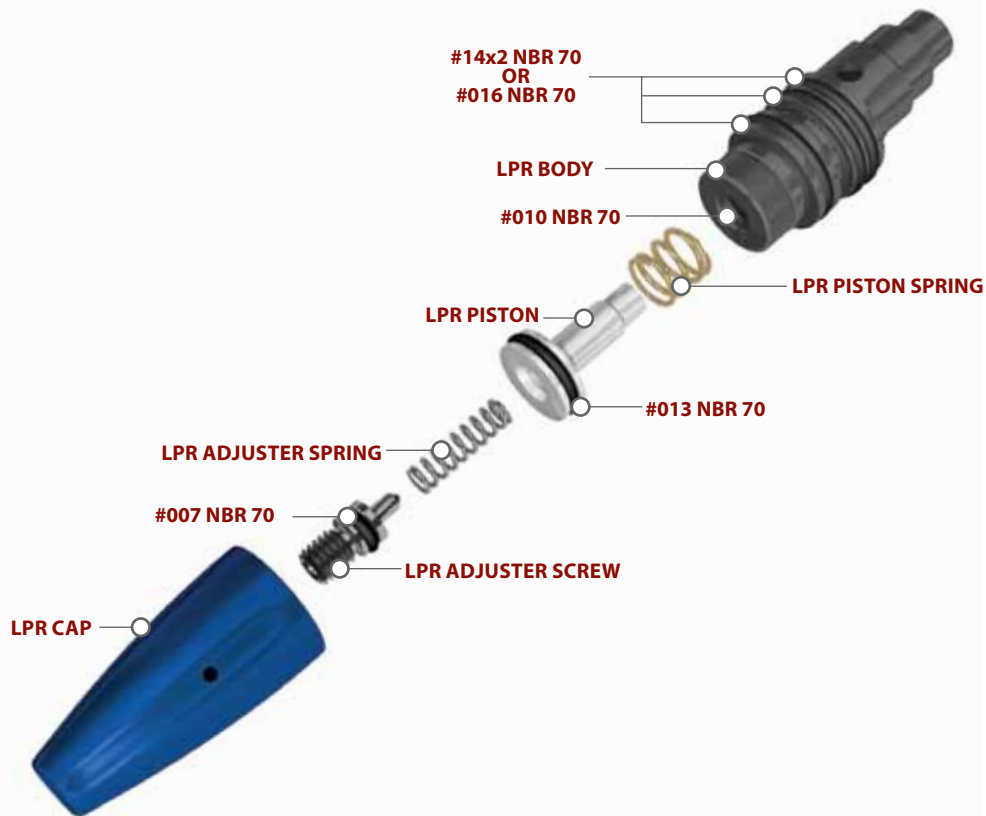
# INLINE REGULATOR



## ORIENTATION



# LOW PRESSURE REGULATOR



## QUICK GUIDE

CONTENTS

**ORIENTATION**

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

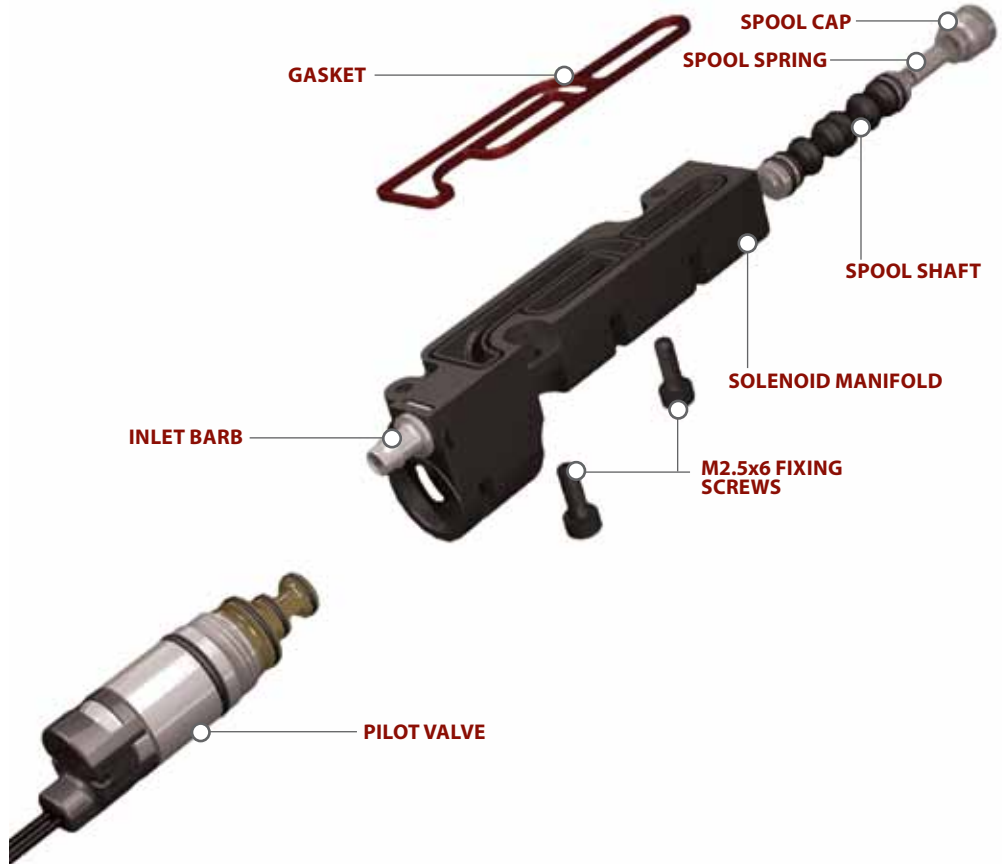
SPARES & ACCESSORIES

INDEX

# ORIENTATION

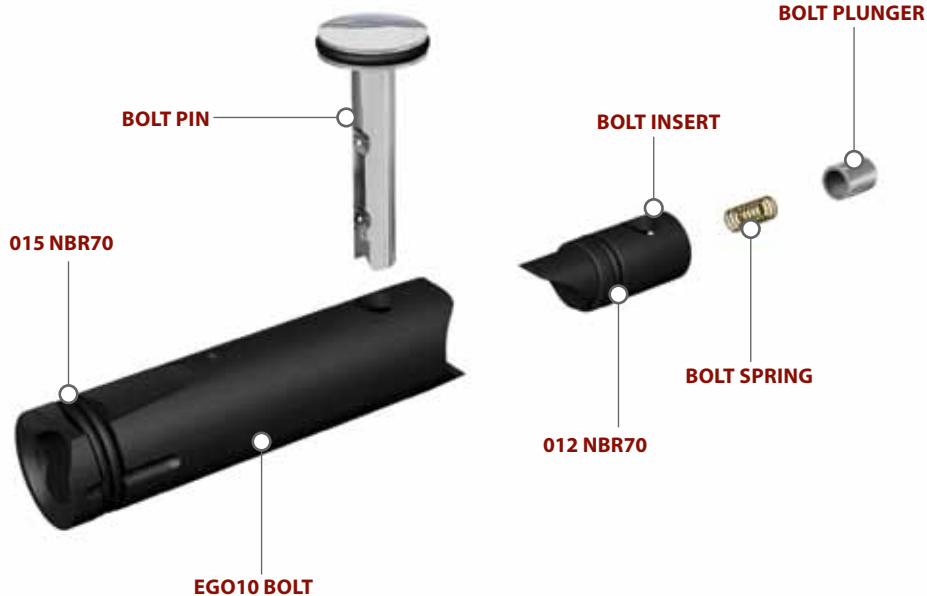
9.

# EGO10 SOLENOID ASSEMBLY



**ORIENTATION**

# EGO10 BOLT ASSEMBLY



**NOTE:** THE CONFIGURATION OF YOUR EGO10 BOLT MAY DIFFER DEPENDING ON THE VERSION OF EGO10 YOU HAVE.

## QUICK GUIDE

CONTENTS

**ORIENTATION**

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES












INDEX

# ORIENTATION

11.

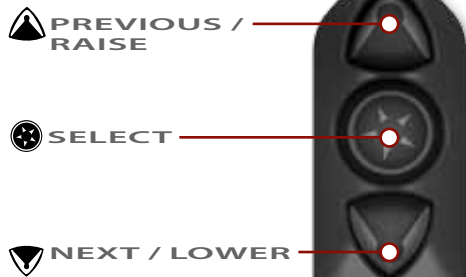
## THE EGO10 NAVIGATION CONSOLE

At the rear of the Ego10 grip frame you will find the navigation console (FIGURE 1.5) which is used for:

- > TURNING THE EGO10 ON AND OFF USING THE  BUTTON
- > SCROLLING THROUGH MENUS WITH THE  AND  BUTTONS
- > SELECTING PARAMETERS TO EDIT USING THE  BUTTON
- > EDITING PARAMETERS USING THE  AND  BUTTONS
- > TURNING THE EGO10 BREAK BEAM SENSOR SYSTEM ON AND OFF USING THE  BUTTON (PUSH AND HOLD)
- > RESETTING RECORDED VALUES USING THE  BUTTON (PUSH AND HOLD)
- > CONTROLLING THE GAME TIMER WITH THE  BUTTON (QUICK PUSH AND RELEASE)
- > SCROLLING THROUGH THE VARIOUS RUN SCREENS USING THE  BUTTON (QUICK PUSH AND RELEASE)
- > DISPLAYING THE CURRENT PRESET LOADED ON THE EGO10 USING THE  BUTTON (QUICK PUSH AND RELEASE)

 **WARNING** //////////////////////////////////////

**WARNING: THE BACKLIGHT ON THE LCD DISPLAY TURNS OFF AFTER A PERIOD OF TIME. WHEN THIS HAPPENS THE MARKER IS STILL ON AND ABLE TO FIRE. TO ADJUST THE LCD BACKLIGHT SEE PAGE 43-44**



**FIG 1.5**

**NOTE:** THE COLOUR OF THE BACKLIGHT ON THE EGO10 LCD SCREEN CAN BE CHANGED BY ADJUSTING THE RED, BLUE AND GREEN LEVEL PARAMETERS. SEE PAGE 43-44 FOR FURTHER DETAILS.

# OPERATIONAL OVERVIEW

Below is a brief overview of what happens during the Ego10 firing cycle. The location of parts discussed in the text below can be found on page 74-75.

Assuming the Ego10 is gassed up and turned on, **FIGURE 1.1** shows the marker in its idle position. The rammer is held in its rear position with pressurised air from the LPR directed through the solenoid to the front of the rammer. The valve chamber is full of pressurised air from the inline regulator.

Providing a ball is in the breach, when the trigger is pulled, a signal is sent to the solenoid which redirects the supply of air from the front of the rammer to the rear, which pushes the rammer and bolt forward toward the valve (**FIGURE 1.2**). As this happens the air in front of the rammer is vented out through an exhaust port in the solenoid manifold.

The rammer makes contact with the valve stem and continues to be pushed forward, now pushing the valve forward with it. This breaks the valve seal allowing pressurised air to flow up through the valve and into the bolt and vent down the barrel, propelling a ball. (**FIGURE 1.3**)

The time that the rammer is held in this forward position is dependant on the *DWELL* parameter. The longer the dwell time the longer the Ego10 vents gas down the barrel. When this dwell time has elapsed, the solenoid redirects the supply of air from the back of the rammer to the front, pushing the rammer and bolt back to the rear position. This loss of forward force allows the valve to re-seal and the valve chamber is re-pressurised. As the rammer moves back air behind it is vented through an exhaust port in the solenoid manifold (**FIGURE 1.4**).

The Ego10 has now completed one cycle and is ready to fire again.

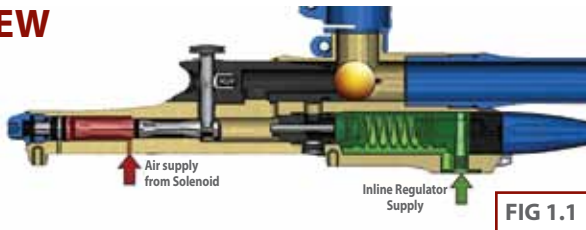


FIG 1.1

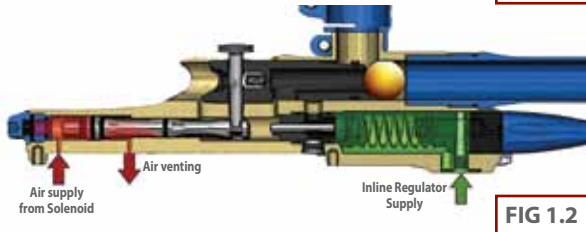


FIG 1.2

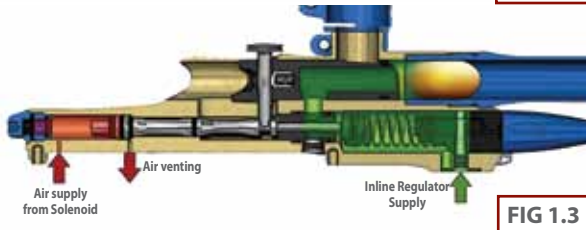


FIG 1.3

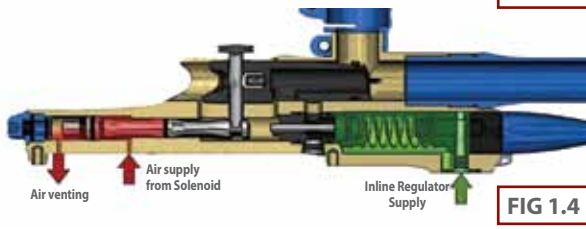


FIG 1.4

## QUICK GUIDE

### CONTENTS

#### ORIENTATION

#### QUICK SET-UP

#### USING YOUR EGO10

#### MENU TREE

#### ADVANCED SET-UP

#### MAINTENANCE

#### FAULT FINDING

#### SERVICE CENTERS

#### PARTS LIST

#### SPARES & ACCESSORIES

#### INDEX

# ORIENTATION

## 14. QUICK SET-UP

14.



# INSTALLING A 9V BATTERY

Ensure that the Ego10 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" (2mm) hex wrench to remove the three countersunk screws that hold the rubber grip onto the frame. Peel the grip to the right to expose the circuit board within the frame.

Remove any fitted battery by sliding your thumb or finger 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 front side of the frame (**SEE FIGURE 2.2**).

Ensure that all of the wires are within the recess of the frame and away from the trigger micro-switch and Opto sensors so as not to interfere with their operation and replace the rubber grip and replace the three countersunk screws.

**DO NOT OVER-TIGHTEN THE SCREWS.**

**NOTE: DO NOT USE RECHARGEABLE BATTERIES OR LOW QUALITY BATTERIES.**



FIG 2.1



FIG 2.2

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

QUICK SET-UP

15.

## SWITCHING ON THE EGO10

To switch on the Ego10 press the button twice in quick succession, referred to elsewhere in this manual as 'double-clicking'. The Ego10 can also be switched on by pushing and holding the button (**FIGURE 3.1**).

## SWITCHING OFF THE EGO10

Press and hold the button until the display shows **TURN OFF**. Release the button and re-press it to turn off the Ego10. Alternatively double click the button to enter the menu tree then press to turn off the Ego10.

**NOTE:** THE DOUBLE CLICKING FEATURE IS USER SELECTABLE, FACTORY DEFAULT IS SET TO ON. IT CAN BE TURNED OFF USING THE DOUBLE CLICK PARAMETER IN THE HARDWARE MENU (SEE PAGE 44)

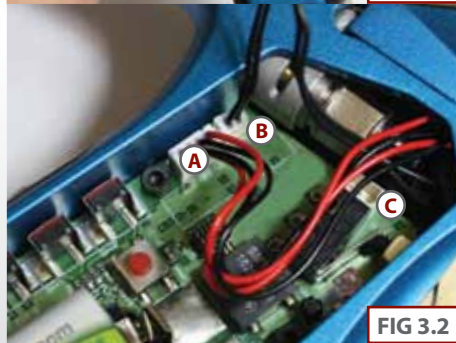
## FIRING THE EGO10

Pull the trigger to fire the Ego10. The entire firing sequence is controlled electronically by the Ego10 circuit board, enabling any user to easily achieve high rates of fire.

## THE EGO10 CIRCUIT BOARD

There are three sockets on the Ego10 circuit board two of which are occupied by the BBSS connector (A) and the Ego10 solenoid connector (B). The third socket on the board (C) is the auxiliary socket to which third party products such as loaders and RF transmitters can be connected using the relevant wiring harness (**SEE FIGURE 3.2**).

**NOTE:** THE AUXILIARY SOCKET IS TURNED ON AND OFF MANUALLY VIA THE AUX OUT PARAMETER IN THE HARDWARE MENU ON PAGE 44





# USING THE BREAK BEAM SENSOR SYSTEM

The break beam sensor system, referred elsewhere in this manual as 'BBSS' is used to detect when a paintball is ready to fire from the Ego10. If no paintball is ready then the BBSS will inhibit the Ego10 from firing. This prevents the Ego10 from 'chopping' paintballs that are not fully loaded into the marker.

To switch off the BBSS, press and hold the ▲ button for 0.5 seconds (SEE FIGURE 3.3).

The BBSS indicator on the top right of the LCD will change from ☉ (enabled) to ☾ (disabled).

To switch the BBSS back on, press and hold the ▲ button for 0.5 second. The indicator will change back to ☉.

When the BBSS is enabled, the indicator will change depending on if the system has detected a ball or not. When no ball has been detected the indicator looks like this ☉ when a ball has been detected the icon changes to look like this ☉.

Additional features of the Ego10's break beam sensor system are covered in full on page 26 of this user manual.

**NOTE:** WHEN THE EGO10 IS TURNED ON, THE BREAK BEAM SENSOR SYSTEM IS AUTOMATICALLY ENABLED.



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# QUICK SET-UP



# SETTING UP YOUR EGO10

Before you can begin to use your Ego10, you will need to attach an air system and a paintball loader.

## INSTALLING A PRESET AIR SYSTEM

Every Ego10 comes complete with an Eclipse On/Off Purge System (OOPS) which provides a direct connection for a preset air system. Before screwing the air system into the OOPS ensure that the On/Off knob is wound out approximately half way (SEE FIGURE 4.1). Be careful not to unscrew the On/Off knob too far as it will come completely off the OOPS. If this happens, replace the On/Off knob by screwing it back onto the OOPS body in a clockwise direction.

Screw the preset air system into the OOPS (SEE FIGURE 4.2) so that the bottle screws in all the way and is tight. Slowly turn the On/Off knob in a clockwise direction allowing the OOPS to depress the pin of the preset air system causing the Ego10 to become pressurised, providing that there is sufficient air in your tank (SEE FIGURE 4.3).

You have now installed a preset air system onto your Ego10.

**⚠ WARNING //////////////////////////////////////**  
**WARNING: THE EGO10 CANNOT BE USED WITH CO2, IT CAN ONLY BE POWERED BY COMPRESSED AIR OR NITROGEN.**

**NOTE: WE RECOMMEND USING A PRESET AIR SYSTEM WITH A HIGH PRESSURE OUTPUT TO ACHIEVE OPTIMUM PERFORMANCE FROM THE EGO10, HOWEVER MOST GOOD QUALITY LOW PRESSURE OUTPUT SYSTEMS WILL ALSO WORK ON THE EGO10.**

**⚠ WARNING //////////////////////////////////////**  
**WARNING: ALWAYS RELIEVE ALL RESIDUAL GAS PRESSURE FROM THE EGO10 BEFORE UNSCREWING THE PRESET AIR SYSTEM.**

**⚠ WARNING //////////////////////////////////////**

**WARNING: MAKE SURE THE MARKER IS TURNED OFF AND THAT NO PAINTBALLS ARE IN THE MARKER OR LOADER BEFORE INSTALLING AN AIR SYSTEM.**



**FIG 4.1**



**FIG 4.2**



**FIG 4.3**

**USING YOUR EGO10**

## T-SLOT MOUNTING SYSTEM

The Ego10 utilises a T-slot arrangement to mount the OOPS to the bottom of the frame. The T-slot is an improvement over the dovetail mounting system found on most paintball markers, and is much more able to withstand the rigours of modern tournament paintball.

For backwards compatibility there are industry standard mounting holes in the base of the frame for mounting third party air source adaptors (ASAs).



## MACROLINE HOISING AND ELBOWS

To aid the longevity of your macroline hosing, it is very important to remove it from (and install it back into) the fittings in the correct manner:

Pull back the collet section of the macroline fitting and keep the collet depressed.

Pull the macroline hose out of the macroline fitting and release the collet.

Before installing the macroline hose into the macroline fitting ensure that the end has been trimmed correctly to ensure a tight fit in the fitting.



**⚠ WARNING //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////**

**IF YOU EVER REMOVE THE MACROLINE HOSE FROM THE FITTING, ALWAYS CHECK THE CONDITION OF YOUR MACROLINE HOISING AND IF IT IS WORN OR THE WRONG LENGTH REPLACE IT IMMEDIATELY.**

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

**USING YOUR EGO10**

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

**USING YOUR EGO10**



## INSTALLING AN ADJUSTABLE AIR SYSTEM

**⚠ WARNING //////////////////////////////////////////////////////////////////**

**WARNING: MAKE SURE THE MARKER IS TURNED OFF AND THAT NO PAINTBALLS ARE IN THE MARKER OR LOADER BEFORE INSTALLING AN AIR SYSTEM.**

Firstly disconnect the macroline hosing from the elbow attached to the OOPS at the base of the grip frame (SEE FIGURE 4.4).

Unscrew the On/Off knob completely from the OOPS and using a 3/32" hex key turn the two screws on the bottom of the OOPS in a counter clockwise direction so that the OOPS can be removed from the rail by sliding it backwards (SEE FIGURE 4.5).

As well as the integrated slide rail at the base of the Ego10's grip frame, there are also two 10-32 UNF threaded screw holes which will accept all standard bottom line screws (SEE FIGURE 4.6).

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.

**⚠ WARNING //////////////////////////////////////////////////////////////////**

**BEFORE ATTACHING ANY FIXED AIR SYSTEM, PLACE ATTACHING SCREW IN THE AIR SYSTEMS DESIGNATED SLIDE RAIL AND MEASURE PROTRUDING SCREW LENGTH. SCREW LENGTH MUST NOT PROTRUDE MORE THAN 10MM/0.40" OTHERWISE THE EGO10 CIRCUIT BOARD WILL BECOME DAMAGED.**



**FIG 4.4**



**FIG 4.5**



**FIG 4.6**

## ATTACHING A LOADER

Using a 5/32" hex key or your fingers, turn the sprocket screw of the clamping feed neck counter clockwise (SEE FIGURE 5.1).

Release the clamping lever on the feed neck (SEE FIGURE 5.2) and test to see if your loader can easily be pushed into the top of the feed neck. If the loader cannot easily be pushed into the feed neck, loosen the sprocket screw of the clamping feed neck a little more by turning it counter clockwise using a 5/32" hex key or your fingers (SEE FIGURE 5.1).

When you have managed to push your loader into the clamping feed neck, close the clamp to secure it firmly in place (SEE FIGURE 5.3). If the loader is loose then you will need to release the clamp, tighten the sprocket screw slightly by turning it clockwise with a 5/32" hex key or your fingers and close the clamp. Repeat this process as necessary to secure your loader in place.

You have now attached a loader to your Ego10. Once you have filled your loader and air tank you will then be ready to begin using your Ego10.



FIG 5.1



FIG 5.2



FIG 5.3

**⚠ WARNING** //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

**WARNING: DO NOT OVER TIGHTEN THE CLAMPING FEED NECK AS THIS MAY DAMAGE THE LOADER OR FEED NECK ITSELF.**

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# USING YOUR EGO10

## SETTING THE TRIGGER

The Ego10 provides the user with the option to use either a micro-switch or an Opto sensor as the means for detecting trigger pulls. Before you begin to adjust and set your trigger, you must first select the method of trigger detection that you wish to use by entering the Main menu and making your selection from the *HARDWARE* menu (see page 42).

There are five adjustment points on the trigger – the **front stop trigger screw**, the **rear stop trigger screw**, the **magnet return strength screw**, the **micro switch activation screw** and the **spring return strength screw**.

As standard each Ego10 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, and the trigger detection method set to Opto.

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 6.1).

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 6.2).

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 6.3).



FIG 6.1



FIG 6.2






FIG 6.3

## (CONTINUED)

The **micro switch activation screw** is used to adjust the point in the trigger pull at which the micro-switch is activated. Turn the screw clockwise to decrease the amount of trigger travel to the activation point. Turn the screw counter clockwise to increase the amount of trigger travel to the activation point (SEE FIGURE 6.4).

The **spring return strength screw** can only be adjusted by first removing the frame from the marker body, as per the instructions in the Maintenance section on page 57. The spring return strength screw is used to adjust the spring strength that returns the trigger to its resting position. Turn the screw clockwise to increase the amount of spring return strength in the trigger pull. Turn this screw counter clockwise to reduce the amount of spring return strength in the trigger pull. Do not turn the screw too far counter clockwise or there will not be enough force to return the trigger consistently (SEE FIGURE 6.5).

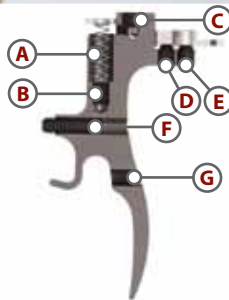
When setting the trigger it is important to ensure that the electronic trigger detection is working correctly. When the trigger is fully depressed the trigger detection indicator (TDI) should point upwards    .

When the trigger is fully released the TDI should point downwards    .

For more information, see understanding the trigger detection indicator (TDI) on page 27 and The *FILTER* menu on page 40.

### FIGURE 6.6 KEY

- A** Spring
- B** Spring Return Strength Screw
- C** Trigger Pin Retaining Screw
- D** Front Stop Trigger Screw
- E** Magnet Return Strength Screw
- F** Micro Switch Activation Screw
- G** Rear Stop Trigger Screw



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# USING YOUR EGO10

23.



## ADJUSTING THE VELOCITY

When using your Ego10, you may wish to change the velocity at which your Ego10 is firing. This is done by inserting a 1/8" hex key into the adjuster screw at the bottom of your Ego10 inline regulator and adjusting it accordingly (SEE FIGURE 7.1). 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. On the bottom of the inline regulator there are engraved arrows to illustrate which direction to turn the hex key to make the relevant adjustment.

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

## ADJUSTING THE LPR PRESSURE

When using your Ego10, you may wish to change the output pressure of your LPR. This is easily done by inserting a 1/8" inch hex key into the adjuster screw at the front and adjusting it accordingly (SEE FIGURE 7.2). However we recommend that the LPR screw be left set 2 turns in (clockwise) from the screw being flush with the front of the LPR cap.

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 IN TOO FAR WILL PREVENT THE EGO10 FROM FIRING.



FIG 7.1



FIG 7.2




# USER INTERFACE


The Ego10 has a simple user interface through which all aspects of its electronic control system can be monitored and adjusted by means of the three pushbuttons and graphical LCD which comprise the navigation console.

## RUN SCREEN LAYOUT

The root of the user interface is the run screen. This screen is the one most often displayed and provides the user with essential feedback on the state of the Ego10. A typical run screen is shown on the right.

On the left of the screen is a display option that is user selectable from by briefly pressing the  button on the navigation console.

- > A GAME TIMER
- > A SHOT COUNTER
- > AN ACTUAL RATE OF FIRE INDICATOR
- > A PEAK RATE OF FIRE INDICATOR

Briefly pressing the  button will replace the display option with the name of the currently selected preset (see page 36).

On the right of the screen are a number of icons, each of which provides graphical indication on different parts of the Ego10 control electronics:

**BREAK BEAM SENSOR SYSTEM INDICATOR**

**AUX OUT INDICATOR**

**TRIGGER DETECTION INDICATOR**

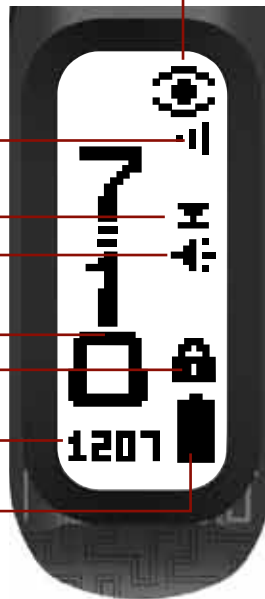
**SOUND INDICATOR**

**USER SELECTABLE DISPLAY OPTION**

**LOCK INDICATOR**

**CLOCK DISPLAY (SELECTED MODELS ONLY)**

**BATTERY LEVEL INDICATOR**



**NOTE:** THE LAYOUT OF THE RUN SCREEN IS CORRECT AT TIME OF PRINTING. HOWEVER NEWER VERSIONS OF THE EGO10 SOFTWARE MAY HAVE A DIFFERENT LAYOUT OF THE RUN SCREEN FROM WHAT IS PRINTED IN THIS MANUAL.

YOU MAY FIND SOME ICONS HAVE BEEN ADDED OR REMOVED ENTIRELY. IF YOU ARE UNSURE ABOUT ANY ICONS WHICH DO NOT FEATURE IN THE MANUAL CONTACT YOUR LOCAL DEALER/SERVICE CENTRE OR PLANET ECLIPSE DIRECTLY.

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

USING YOUR EGO10

## THE BREAK BEAM SENSOR SYSTEM INDICATOR (BBSS)

The BBSS is able to switch itself off in the event of a blockage or contamination preventing 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 indicator on the main screen is used to indicate the eight possible states of the BBSS as follows:



**BBSS ENABLED AND BALL DETECTED**  
The Ego10 can be fired at the maximum rate of fire determined by the chosen firing mode.



**BBSS ENABLED NO BALL DETECTED**  
The Ego10 cannot be fired.



**BBSS DISABLED**  
The Ego10 can be fired at a maximum rate of fire as set by the *BS OFF ROF* parameter (see page 37).



**BBSS FAULT DETECTED**  
The system is disabled. The Ego10 can only be fired at a maximum rate of 2bps less than the maximum rate of fire, up to a maximum of 10 bps.



**BBSS FAULT HAS BEEN CLEARED AND BALL DETECTED**  
The sensor has been re-enabled. A ball is detected and the Ego10 can be fired at the maximum rate of fire determined by the chosen firing mode.



**BBSS FAULT HAS BEEN CLEARED AND NO BALL DETECTED**  
The sensor is enabled. No ball is detected so the Ego10 cannot be fired. To reset the BBSS icon, use the button to switch off the BBSS and then back on again.



**BBSS ENABLED IN TRAINING MODE**  
The BBSS has been over-ridden as the user has selected training mode. As the user has chosen to leave the BBSS on, the achievable rate of fire is limited by the firing mode.



**BBSS DISABLED IN TRAINING MODE**  
The BBSS has been over-ridden as the user has selected training mode. As the user has chosen to turn the BBSS off, the achievable rate of fire is limited by the *BS OFF ROF* parameter (see page 37).

## THE AUX OUT INDICATOR

The auxiliary socket on the Ego10 circuit board allows third party products such as loaders or RF transmitters to be interfaced to the Ego10.

The AUX out indicator is turned on and off via the *AUX OUT* parameter (see page 44).

There are two possible conditions that can be indicated:



**AUX OUT ENABLED**  
The AUX OUT is enabled. Each time the circuit board detects a valid trigger pull a signal will be sent to the AUX connector on the circuit board.



**AUX OUT DISABLED**  
The AUX OUT is disabled. No signal will be sent to the AUX connector on the circuit board.

# THE SOUND INDICATOR

The sound indicator on the run screen is used to convey if the *SOUND* parameter in the *HARDWARE* menu (page 43) is switched on or off.

There are two possible conditions that can be indicated:



## SOUND ENABLED

The *SOUND* parameter is enabled. The Ego10 will make sounds when switched on and off and when the game timer alarms or times out.



## SOUND DISABLED

The *SOUND* parameter is disabled. The Ego10 will not make any sounds.

# THE TRIGGER DETECTION INDICATOR (TDI)

In order for the trigger to be successfully operated it must first be released and then pulled. The trigger detection indicator (TDI) is used to indicate each of the possible trigger states.



## OPTO SENSOR SELECTED, READING 0%

The Ego10 is configured to use the Opto sensor to detect trigger pulls. The Opto sensor is currently reading 0%, i.e. the trigger is fully released.



## OPTO SENSOR SELECTED, READING BELOW RELEASE POINT

The Ego10 is configured to use the Opto sensor to detect trigger pulls. The Opto sensor is currently reading below the Opto release point, i.e. the trigger is considered 'released'.



## OPTO SENSOR SELECTED, READING MID-RANGE

The Ego10 is configured to use the Opto sensor to detect trigger pulls. The Opto sensor is currently reading somewhere between the Opto release point and the Opto pull point, i.e. the trigger is half depressed.



## OPTO SENSOR SELECTED, READING ABOVE PULL POINT

The Ego10 is configured to use the Opto sensor to detect trigger pulls. The Opto sensor is currently reading above the Opto pull point, i.e. the trigger is considered 'pulled'.



## OPTO SENSOR SELECTED, READING 100%

The Ego10 is configured to use the Opto sensor to detect trigger pulls. The Opto sensor is currently reading 100%, i.e. the trigger is fully depressed.



## MICRO-SWITCH SELECTED, NOT ACTUATED

The Ego10 is configured to use the micro-switch to detect trigger pulls. The micro-switch is not currently actuated, i.e. the trigger is released.



## MICRO-SWITCH SELECTED, ACTUATED

The Ego10 is configured to use the micro-switch to detect trigger pulls. The micro-switch is currently actuated, i.e. the trigger is pulled.

From the factory the Ego10 will have the Opto sensor enabled. The micro-switch option can be selected by referring to the *HARDWARE* menu (see page 43).

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS


PARTS LIST


SPARES & ACCESSORIES

INDEX

## THE LOCK INDICATOR


The Ego10 has a tournament lock which prevents the user from making changes to any parameter that affects the way in which the Ego10 shoots, without the need for tools. This feature is necessary in order to make the Ego10 legal for tournament play.


When the lock is enabled the lock indicator will show a closed padlock .

When the lock is disabled the lock indicator will show an open padlock .


To enable or disable the tournament lock see *Accessing the Menu System* on page 34.

## THE BATTERY LEVEL INDICATOR

The battery level indicator is used to show the state of the battery within the Ego10. When the battery is fresh the indicator will show a 'full' battery  and as the battery is drained, so the indicator will show the battery emptying. When the battery reaches a point at which the Ego10 will no longer function reliably, the indicator will start to flash. At this point the battery must be changed immediately.


As well as displaying the voltage level the battery, the indicator also warns if the battery being used has an incorrect voltage to operate the electronics reliably. The icon for a battery with an incorrect voltage output is . If this icon is shown the battery must be replaced immediately.


## THE GAME TIMER

When the game timer is shown on the run screen then it can be started by pressing the  button and the timer will start to count down. The game timer can also be configured to start on a trigger press with the *START* parameter (see page 47).


When the game timer reaches the *ALARM TIME* the game timer will start to flash and the audible alarm will sound every second, provided that the *SOUND* parameter is on.

When the game timer reaches 00:00, *GAME OVER* will be displayed and the audible alarm will sound continually, provided that the *SOUND* parameter is set to 'ON'.

To stop the game timer at any time press and hold the  button for 0.5 seconds.

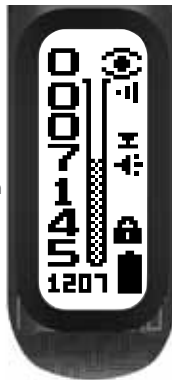
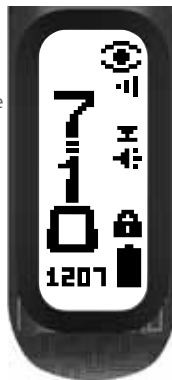
To reset the game timer to its preset start time, push and hold the  button for 1 second. The game timer will also be reset whenever the Ego10 is switched off.

## THE SHOT COUNTER


The shot counter will increment every time that the Ego10 solenoid is activated, regardless of whether the shot counter is displayed or not. When the shot counter is displayed on the run screen it can be reset to 0 by pressing and holding the  button for 0.5 seconds.

There is also an optional shot gauge that can be displayed on this run screen. The gauge counts down from a user adjustable number. To alter the gauge settings see pages 46.

The gauge is reset whenever the Ego10 is switched off or the  button is pressed.




## THE ACTUAL RATE OF FIRE

When the actual ROF is selected for display the run screen will look something like the screen to the right. The value displayed in the top left of the screen represents the number of full cycles completed in a second - the actual rate of fire over that second. The graph below this number shows the actual rates of fire achieved over time where each bar represents the amount of pulls in that second. To reset the maximum, press and hold the  button for 1 second.



## THE PEAK RATE OF FIRE

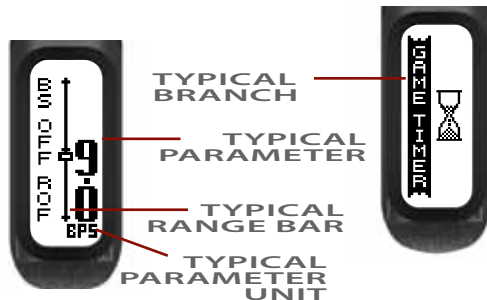
When the peak ROF is selected for display the run screen will look something like the screen to the right, which differs from the display of the actual ROF by the inclusion of the indicator 'PK'. The value displayed in the top left of the screen represents the maximum peak rate of fire that has been recorded. The graph below this number shows the peak rates of fire achieved over time. To reset this maximum, press and hold the  button for 0.5 seconds.



The peak ROF is typically higher than the actual ROF as it is much easier to fire two shots in quick succession than it is to maintain a string over a longer period of time.

## THE MENU SYSTEM

Behind the run screen is a structured menu system comprised of two layers of menus. Each menu contains a number of menu items and each menu item can either be a parameter or a branch to another menu. Branches have an animated graphic on the right of the display, whereas parameters have their current value.



On parameter screens a range bar will be displayed where there is a large scale of adjustability in that parameter. The current parameter value is displayed as a box on the range bar which is used to indicate the range of adjustability in the parameter value.

At the bottom of the parameter screen the unit for that parameter will be displayed. Some parameters will not have units, such as on or off parameters. For a detailed list of which parameters have units, and what they stand for, please see the Menu Tree on pages 30-33.

The menu structure is shown in the following pages.

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

USING YOUR EGO10

# MAIN MENU

## MAIN MENU

—	TURN OFF		Turn off the Ego10
—	PRESET		
—	🔒 LOAD	USER 1 USER 2 FACTORY NPPL PSP 10 PSP 12 MS 10 CANCEL	Load the USER1 settings Load the USER 2 settings Load the default factory settings (semi-automatic) Load NPPL 2008 compliant settings Load the PSP 10 balls per second (BPS) compliant settings Load the PSP 12 balls per second (BPS) compliant settings Load Millennium Series 2010 compliant settings Cancel the load operation
—	🔒 SAVE	USER 1 USER 2 CANCEL	Save the current settings as the USER 1 settings Save the current settings as the USER 2 settings Cancel the save operation
—	BACK		Return to Main menu
—	🔒 FIRE MODE	SEMI RAMP CANCEL	Select semi-automatic mode of fire Select ramping mode of fire Cancel the mode selection
—	🔒 ROF CAP	ON OFF CANCEL	Rate of fire cap on Rate of fire cap off Cancel selection
—	🔒 BS ON ROF*	4.0 - 30.0 BPS	Maximum with breech sensor on (ROF CAP dependant)
—	🔒 BS OFF ROF	4.0 - 15.0 BPS	Maximum rate of fire with breech sensor off

The 🔒 symbol indicates parameters that are locked when the tournament lock is on. See *Accessing the Menu System* on page 34 for instruction on releasing the tournament lock.

Parameters followed by a \* are part of the smart menu system and will only be displayed depending on your chosen settings. (E.g. The BS ON ROF parameter will only become available if the ROF CAP parameter is set to on).

# MAIN MENU

## RAMP SETUP\* (FIRE MODE DEPENDANT)

🔒 TYPE	STEP	Step ramping
	LINEAR	Linear ramping
	CANCEL	Cancel selection
🔒 RATE*	0 - 100%	Percentage linear ramp rate (TYPE dependant)
🔒 SEMI SHOTS	3 - 9	Number of shots before ramping can start
🔒 KICK IN	3.3 - 10.0 PPS	Rate at which trigger has to be pulled in pulls per second (PPS) before ramping can start
🔒 SUSTAIN	3.3 - 10.0 PPS	Rate at which trigger has to be pulled in pulls per second (PPS) in order to maintain ramping
🔒 RESTART	0.0 - 1.0 S	Time in seconds after last trigger pull during which ramp can be restarted
BACK		Return to Main menu

## TIMING

🔒 DWELL	0.0 - 25.0 ms	Solenoid energise time in milliseconds (ms) for each shot
🔒 FSD COMP	3.0 - 5.0 ms	First shot drop-off compensation time in milliseconds (ms)
🔒 FSD DELAY	00 : 05 - 04 : 00	First shot drop-off delay
BACK		Return to Main menu

## FILTER

🔒 DEBOUNCE	Level 9	Use trigger debounce level 9 (less bounce)
	Level x	Use trigger debounce level 8 - 2
	Level 1	Use trigger debounce level 1 (more bounce)
	Cancel	Cancel debounce selection
🔒 EMPTY	1.0 - 20.0 ms	Time in milliseconds (ms) that the breech must remain empty before the BBSS can look for a paintball

# QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# MENU TREE

31.

## MAIN MENU


<b>🔒 FULL</b>	1.0 - 20.0 ms	Time in milliseconds (ms) that a paintball must be in the breech for the Ego10 to be ready to fire
<b>🔒 PULL TM</b>	3.0 - 25.0 ms	Time in milliseconds (ms) that the trigger must be pulled for a shot to be fired
<b>🔒 RELEASE TM</b>	3.0 - 25.0 ms	Time in milliseconds (ms) that the trigger must be released before a pull can be recorded
<b>🔒 PULL PT*</b>	51 - 99%	Percentage at which the trigger Opto sensor pull point is set (TRIGGER dependant)
<b>🔒 RELEASE PT*</b>	1 - 49%	Percentage at which the trigger Opto sensor release point is set (TRIGGER dependant)
<b>BACK</b>		Return to Main menu

### HARDWARE

<b>🔒 TRIGGER</b>	Opto Switch Cancel	Use Opto sensor to detect trigger operation Use micro-switch to detect trigger operation Cancel trigger detection method selection
<b>SOUND</b>	Off On Cancel	Turn off audible indicator Turn on audible indicator Cancel audible indicator selection
<b>TONES*</b>	Off On Cancel	Turn off audible tone when any button is pressed (SOUND dependant) Turn on audible tone when any button is pressed (SOUND dependant) Cancel audible tone selection
<b>BACKLIGHT</b>	00:00 - 00:20	Time in seconds that the backlight comes on for (00:00 = no backlight)
<b>RED LEVEL*</b>	0 - 100%	Percentage of red light in backlight (BACKLIGHT dependant)
<b>GRN LEVEL*</b>	0 - 100%	Percentage of green light in backlight (BACKLIGHT dependant)
<b>BLU LEVEL*</b>	0 - 100%	Percentage of blue light in backlight (BACKLIGHT dependant)
<b>AUX OUT</b>	Off On Cancel	AUX socket output off AUX socket output on Cancel AUX socket selection
<b>AUTO OFF</b>	05:00 - 60:00	Time in hours and minutes after which the Ego10 automatically powers off



# MAIN MENU

	<b>DBL CLICK</b>	NONE POWER UP ALL CANCEL	Double click is disabled entirely Double click for power up only Double click is fully enabled Cancel the DBL click selection
	<b>BACK</b>		Return to Main menu
<b>TRAINING</b>		Off On Cancel	Training mode disabled Training mode enabled Cancel training mode selection
<b>CLOCK</b>			
	<b>TIME</b>	00:00 - 23:59	Current time in 24 hour clock format
	<b>DATE</b>	00 - JAN - 00	Current date display in day/month/year format
	<b>BACK</b>		Return to Main menu
<b>SHOT COUNT</b>			
	<b>GAUGE</b>	OFF ON CANCEL	Shot gauge off Shot gauge on Cancel selection
	<b>GAUGE MAX*</b>	100-2000 SHOTS	Shot gauge maximum (reset value) (GAUGE dependant)
	<b>BACK</b>		Return to Main menu
<b>GAME TIMER</b>			
	<b>GAME</b>	00:00 - 60:00	Countdown game timer start time in minutes
	<b>ALARM</b>	00:00 - 60:00	Alarm activation time in minutes
	<b>START</b>	Button Trigger Cancel	 Button starts the game timer Trigger pull starts the game timer Cancel game timer start selection
	<b>BACK</b>		Return to Main menu
<b>EXIT</b>			

The arrangement of menus and sub menus displayed in the above menu tree may not be replicated in your marker due to any software updates that may have taken place since printing.

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

**MENU TREE**

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# MENU TREE

## ACCESSING THE MENU SYSTEM

To access the Main menu from the run screen double-click the **⬆** button and the first item on the Main menu will be displayed. Alternatively, push and hold the **⬆** button for 2 seconds.

Some of the parameters in the menu system can have a tournament lock applied to them. This lock can be toggled on and off by pressing to tournament lock button on the circuit board ( see A in fig 8.1).

If you try to select a parameter that is locked, the locked display will show on the screen.



**FIG 8.1**

## MOVING AROUND THE MENUS

Press and release the **⬇** button to display the next item on the menu. When the last menu item is displayed, pressing the **⬇** button will display the first item. Press and release the **⬆** button to display the previous item on the menu. When the first menu item is displayed, pressing the **⬆** button will display the last item. When the displayed item is a branch, as indicated by an animation on the right of the screen, press the **⊗** button to move to another menu.

## ALTERING PARAMETERS

When the displayed item is a parameter, as indicated by a parameter value on the right of the screen, pressing the **⊗** button will activate the *EDIT* mode which allows the parameter value to be altered. When *EDIT* mode is active, the black box surrounding the text disappears. There are two types of parameter, numeric parameters and choice parameters.



A numeric parameter has a numeric value whereas a choice parameter is one that has a small number of distinct choices. Altering parameter values is essentially the same for both types of parameter.

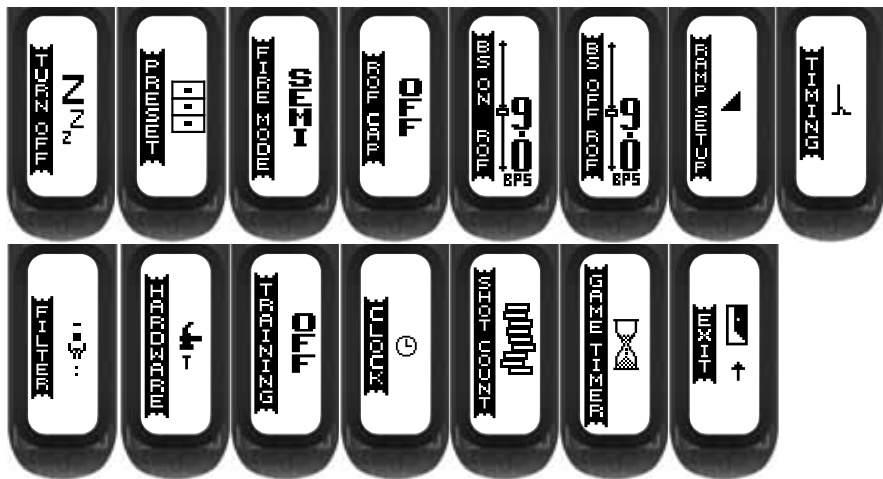
To alter a numeric parameter, first activate the *EDIT* mode. Press the **⬆** button to increase the parameter value one step at a time. Press and hold the **⬆** button to increase the parameter value rapidly. When the value reaches it's maximum it will revert to it's minimum value. Press the **⬇** button to decrease the parameter value one step at a time. Press and hold the **⬇** button to decrease the parameter value rapidly. When the value reaches it's minimum it will revert to it's maximum value. When the required parameter value is displayed press the **⊗** button to accept the value and end the *EDIT* mode.

To alter a choice parameter, first activate the *EDIT* mode. Press the **⬇** button to display the next choice in the list. When the last choice is displayed, pressing **⬇** will display the first choice in the list. Press the **⬆** button to display the previous choice in the list. When the first choice is displayed, pressing the **⬆** button will display the last choice in the list. When the required choice is displayed press the **⊗** button to accept the choice and end the *EDIT* mode. If the displayed choice is cancel then pressing the **⊗** button will end the *EDIT* mode and restore the parameter to the value that it was prior to editing.

**⚠ WARNING** //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

**WARNING: THE MARKER CAN BE FIRED WHILE NAVIGATING ALL MENUS AND PARAMETERS.**

# THE MAIN MENU



The Main menu is contains both individual editable parameters and sub-menus which contain editable parameters. Some of these parameters affect the way the Ego10 shoots and are tournament locked as standard from the factory.

**NOTE:** THE LAYOUT OF THE MAIN MENU IS CORRECT AT TIME OF PRINTING. HOWEVER NEWER VERSIONS OF THE EGO10 SOFTWARE MAY HAVE A DIFFERENT LAYOUT OF THE MAIN MENU, SUB-MENUS AND PARAMETERS FROM WHAT IS PRINTED IN THIS MANUAL.

YOU MAY FIND SOME PARAMETERS HAVE BEEN ADDED OR REMOVED ENTIRELY. IF YOU ARE UNSURE ABOUT ANY PARAMETERS WHICH DO NOT FEATURE IN THE MANUAL CONTACT YOUR LOCAL DEALER/ SERVICE CENTRE OR PLANET ECLIPSE DIRECTLY.

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# ADVANCED SET-UP

## PRESET THE PRESET MENU

In order to simplify the set up of the Ego10 a number of preset configurations are available for selection. Choosing one of these presets will cause all of the necessary parameters to be set in such a way as to make the Ego10 comply with the rules governing a particular paintball league\*\*. It is also possible for the user to save up to two preset configurations of their own.



## LOAD THE LOAD PRESET PARAMETER

This parameter is used to load the required preset configuration and has the following choices:

- > **USER 1:** Load a set of custom firing mode parameters that have been previously saved by the user.
- > **USER 2:** Load a set of custom firing mode parameters that have been previously saved by the user.
- > **FACTORY:** Reset every parameter to the factory set default. The Ego10 leaves the factory set in this way.



> **NPPL:** Load a set of parameters that configures the Ego10 to comply with the 2008 NPPL rules governing firing modes.

> **PSP 10:** Load a set of parameters that configures the Ego10 to comply with the PSP rules governing firing modes in lower divisions (10bps).

> **PSP 12:** Load a set of parameters that configures the Ego10 to comply with the PSP rules governing firing modes in higher divisions (12bps).

> **MS10:** Load a set of parameters that configures the Ego10 to comply with the 2010 Millennium Series rules governing firing modes.

> **CANCEL:** Editing is cancelled and the parameter remains unchanged.

## SAVE THE SAVE PRESET PARAMETER

This parameter is used to save the current set of parameters as a user defined custom preset configuration.

This parameter has the following choices:

- > **USER 1:** Save the current parameters as the preset 'USER 1'.
- > **USER 2:** Save the current parameters as the preset 'USER 2'.
- > **CANCEL:** Editing is cancelled and the parameter remains unchanged.



**NOTE:** ALL PRESETS ARE CORRECT AT TIME OF PRINTING. PLEASE CHECK WITH THE EVENT ORGANISER TO MAKE SURE THE ABOVE PRESETS ARE STILL CONSIDERED LEGAL.

## FIRE MODE

### THE FIRING MODE PARAMETER

This parameter is used to select the firing mode of the Ego10 and has the following choices:

> **SEMI:** This is the default and in this firing mode the Ego10 will fire one shot for every trigger pull.

> **RAMP\*\*:** In this firing mode, the rate of fire is increased above the rate at which the trigger is pulled once certain criteria have been met. These criteria are set by the parameters on the *RAMP SETUP* menu.

> **CANCEL:** Editing is cancelled and the parameter is unchanged.

**\*\* NOTE:** SOME PRESETS AND FIRE MODES MAY ONLY BE AVAILABLE IN CERTAIN COUNTRIES AND ON SOME MODELS OF THE EGO10.



## BS ON ROF

### THE MAXIMUM RATE OF FIRE PARAMETER

The *BS ON ROF* parameter is used to set the maximum achievable rate of fire from the Ego10. The value of this parameter can be adjusted between 4.0 and 30.0 balls per second in 0.1bps increments.

The *BS ON ROF* parameter will only be displayed if you have set the *ROF CAP* parameter to 'ON'.



## BS OFF ROF

### THE RATE OF FIRE WHEN BBSS IS OFF PARAMETER

The *BS OFF ROF* parameter is used to control how fast the Ego10 cycles when the Break Beam Sensor System is disabled. This parameter can be set between 4.0 and 15.0 balls per second and should always be set to the slowest speed of the loading system in use.



## ROF CAP

### THE RATE OF FIRE CAP PARAMETER

The *ROF CAP* parameter is used to specify whether or not the Ego10 should have a limited, or capped rate of fire. When the *ROF CAP* is enabled, the maximum achievable rate of fire is set by the *BS ON ROF* parameter. Choices for the *ROF CAP* parameter are:

> **OFF:** Rate of fire only limited by the loader.

> **ON:** Rate of fire limited to the *BS ON ROF* parameter value.

> **CANCEL:** Cancel editing and leave the parameter unchanged.



**NOTE:** ALWAYS CALIBRATE YOUR EGO10 ROF CAP PARAMETERS TO THE LOCAL FIELD BPS METER AS READINGS MAY VARY FROM METER TO METER.

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# ADVANCED SET-UP

## RAMP SETUP THE RAMP SETTINGS MENU

This menu is only available when ramping has been selected with the *FIRE MODE* parameter and comprises a list of parameters that control the way in which the Ego10 ramps, as shown below.



### TYPE THE RAMP TYPE PARAMETER

This parameter is used to select the ramping style and has the following choices (see opposite):



> **STEP:** Step ramping will cause the Ego10 to shoot in semi-automatic until a number of trigger pulls, set by *SEMI SHOTS*, have been made at a minimum pull rate, set by *KICK IN*. At this point the rate of fire will step up to the maximum rate of fire as set by *BS ON ROF* (or the maximum loader speed if the *ROF CAP* parameter is set to off). Ramping is maintained as long as the user continues to pull the trigger at a required rate set by *SUSTAIN*.

> **LINEAR:** Linear ramping will cause the Ego10 to shoot in semi-automatic until a number of trigger pulls, set by *SEMI SHOTS*, have been made at a minimum pull rate, set by *KICK IN*. At this point the rate of fire will equal the rate of trigger pulls increased by the percentage specified by *RATE* up to a maximum rate of fire as set by *BS ON ROF*, if the *ROF CAP* is on. Ramping is maintained as long as the user continues to pull the trigger at a required rate set by *SUSTAIN*.

> **CANCEL:** Editing is cancelled and no changes are made to the parameter.

### RATE THE LINEAR RAMP RATE PARAMETER

The parameter is only available when *LINEAR* ramping is selected and is used to set the percentage increase in rate of fire over rate of trigger pulls.

For example, if the user is pulling the trigger at a rate of 10 pulls per second and the *RATE* parameter is set to 50% then the rate of fire is 10 plus 50% extra which is 15 balls per second.

This parameter can be set between 0 and 100% in 10% increments.



## SEMI SHOTS

### THE SEMI SHOTS MENU

The parameter sets the number of shots in semi-automatic that are required at the *KICK IN* rate before ramping will start. The parameter can be set between 3 and 9 pulls in 1 pull increments.



## KICK IN

### THE KICK-IN PARAMETER

This parameter sets the minimum rate at which the user has to pull the trigger in order to start ramping. This parameter can be set between 3.3 and 10.0 pulls per second in 0.1 pulls per second increments.



## SUSTAIN

### THE SUSTAIN RATE PARAMETER

Once the Ego10 is ramping the user has to continue to pull the trigger at a minimum rate in order to maintain the ramping. This parameter sets this rate and can be set between 3.3 and 10.0 pulls per second in 0.1 pulls per second increments.



## RESTART

### THE RAMP RESTART PARAMETER

The *RESTART* parameter defines the amount of time after the last trigger pull during which the ramp can be restarted with a single trigger pull. If a trigger pull occurs after the *RESTART* time has expired, then the other ramp start conditions have to be met before ramping will restart. This parameter can be set between 0.0 and 1.0 seconds in 0.1 second increments.



## TIMING

### THE TIMING MENU

The parameters on the *TIMING* menu all relate to the control of the solenoid valve (see overleaf).



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# ADVANCED SET-UP

## DWELL THE DWELL PARAMETER

The *DWELL* parameter sets the amount of time that the solenoid is energized and therefore the amount of gas that is released with each shot of the Ego10. Setting this parameter too low will result in low velocity shots and/or excessive shot to shot velocity fluctuations. Setting the parameter too high will simply waste gas and make the Ego10 louder. The *DWELL* can be set between 0.0 and 25.0 milliseconds. The factory default setting can normally be reduced after a few thousand shots as the Ego10 'beds-in'.



## FSD COMP THE FIRST SHOT DROP-OFF COMPENSATION PARAMETER

First shot drop off is a reduction in velocity of the first shot fired after an extended period of not firing and is caused by the stiction between dynamic o-rings and the surfaces that they are in contact with. In order to compensate for first shot drop-off this parameter can be set to add extra time to the *DWELL* parameter for the first shot. This parameter can be set between 3.0 and 5.0 milliseconds.



## FSD DLY THE FIRST SHOT DROP-OFF DELAY PARAMETER

The time that has to elapse before the FSD COMP is applied to a shot following a previous shot. This parameter can be set between 00:00 and 04:00 minutes.



## FILTER THE FILTER MENU

The parameters on the *FILTER* menu are all used to tune the Ego10's software filters which prevent the Ego10 from firing unless all of the necessary conditions are met. The factory default settings will be suitable for most set-ups, however certain loader and trigger set-ups may require modification of one or more of these parameters.





## DEBOUNCE

### THE DEBOUNCE PARAMETER

The *DEBOUNCE* parameter is used to combat any trigger bounce that might occur in the Ego10 and can be set between level 1 and level 9 in one level increments.

> **LEVEL 9:** Level 9 providing the most filtering (least 'bouncy').

> **LEVEL 1:** Level 1 providing the least filtering (most 'bouncy').

> **CANCEL:** Cancel editing and leave the parameter unchanged.



## EMPTY

### THE BREECH EMPTY TIME PARAMETER

In order for the BBSS to function correctly it must first detect that the bolt is fully retracted and the breech is empty, and then detect that a paintball is loaded into the breech before the Ego10 is allowed to fire. Slots or holes in some third party bolts can fool the BBSS and so this parameter is used to specify a minimum time that the breech

must be empty. The parameter can be set between 1.0 and 20.0ms in 0.5ms increments.

## FULL

### THE BREECH FULL TIME PARAMETER

Tumbling paintballs can take time to settle in the breech before they can be successfully fired. This parameter is used to set the amount of time that a paintball has to be in the breech before the Ego10 is allowed to fire. This parameter can be set between 1.0 and 20 milliseconds in 0.5ms increments.



## PULL TM

### THE TRIGGER PULL TIME PARAMETER

The *PULL TM* parameter is used to set the minimum amount of time that the trigger must be pulled before it is recognised as a valid trigger pull. This parameter can be set between 3.0 and 20.0 milliseconds in 0.5 increments.



## RELEASE TM

### THE TRIGGER RELEASE TIME PARAMETER

The *RELEASE TM* parameter is used to set the minimum amount of time that the trigger must be released before it is recognised as a valid trigger release. This parameter can be set between 3.0 and 25.0 milliseconds in 0.1 millisecond increments.

## PULL PT

### THE TRIGGER PULL POINT PARAMETER

The *PULL PT* parameter is only available if OPTO has been selected in the *HARDWARE* menu. *PULL PT* defines the point at which the trigger is considered pulled and is adjustable between 51% and 99% in 1% increments.



## RELEASE PT

### THE TRIGGER RELEASE POINT PARAMETER

The *RELEASE PT* parameter is only available if OPTO has been selected in the *HARDWARE* menu. *RELEASE PT* defines the point at which the trigger is considered released and is adjustable between 1% and 49% in 1% increments.



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# ADVANCED SET-UP

## BASIC TRIGGER FILTER SET-UP

95% of trigger bounce problems can be eliminated by utilizing one of the nine fixed *DEBOUNCE* choices (LEVEL 1-9). In attempting to eliminate trigger bounce it is advisable to try the nine fixed *DEBOUNCE* choices before attempting any advanced set up of the trigger filters.

## ADVANCED TRIGGER FILTER SET-UP

In order to optimize the trigger filters it is necessary to have the *PULL PT* parameter set as high as possible and the *RELEASE PT* parameter set as low as possible:

1. Select the *PULL PT* 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 *PULL PT* 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 41).
4. Select the *RELEASE PT* 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 top right of the display.

## HARDWARE THE HARDWARE MENU

The *HARDWARE* menu comprises parameters that control low level functionality of the Ego10 electronic hardware.



## TRIGGER

### THE TRIGGER DETECTION PARAMETER

The Ego10 is fitted with a dual trigger pull detection system. A non-contact Opto-electronic trigger sensor arrangement is used to detect trigger movement whilst a micro-switch is used to provide a more traditional tactile feedback for the trigger. The **TRIGGER** parameter is used to select which system is used. The choices available are as follows:

- > **OPTO**: Select the Opto sensor for trigger pull detection.
- > **SWITCH**: Select the micro-switch for trigger pull detection.
- > **CANCEL**: Cancel editing and leave the parameter unchanged.



## SOUND

### THE SOUND PARAMETER

The Ego10 board is capable of emitting a variety of sounds to audibly signal when certain functions have been performed, including, but not limited to, powering up, powering off, changing the BBSS mode and resetting various counters and timers. This parameter determines if this feature is switched on or off, switching it on will cause more drain on the battery. The choices available for this parameter are:

- > **OFF**: Sounds switched off.
- > **ON**: Sounds switched on.
- > **CANCEL**: Cancel editing and leave the parameter unchanged.



## TONES

### THE TONES PARAMETER

This parameter determines if the Ego10 emits a tone each time any of the pushbuttons on the navigation console are activated. As part of the smart menu system the **TONES** parameter will only be shown in the **HARDWARE** menu if the **SOUND** parameter is switched 'ON'. The choices available for this parameter are:

- > **OFF**: Tones switched off.
- > **ON**: Tones switched on.
- > **CANCEL**: Cancel editing and leave the parameter



## BACKLIGHT

### THE LCD BACKLIGHT TIME PARAMETER

The time the LCD backlight remains on after a pushbutton is pushed. The parameter can be set between 0 and 20 seconds.

If the time is set to 00:00 then the light will not be displayed.

## RED LEVEL

### THE LCD BACKLIGHT RED LEVEL PARAMETER

The percentage of red light emitted from the LCD backlight.



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

## GRN LEVEL

### THE LCD BACKLIGHT GREEN LEVEL PARAMETER

The percentage of green light emitted from the LCD backlight.



## DBL CLICK

### THE DOUBLE CLICKING PARAMETER

This parameter is used to select where double-clicking the button can be used. The choices available for this parameter are:



>**NONE**: Double clicking is disabled entirely. To power up the Ego10 and enter the Main menu the user needs to push and hold the button.

>**POWER UP**: Double clicking only works when powering up the Ego10. To enter the Main menu the user still needs to push and hold the button.

>**ALL**: Double clicking works when powering up the Ego10 and entering the Main menu. Push and hold still works for these procedures as well.

>**CANCEL**: Cancel editing and leave the parameter unchanged.



## BLU LEVEL

### THE LCD BACKLIGHT BLUE LEVEL PARAMETER

The percentage of blue light emitted from the LCD backlight.

## AUX OUT

### THE AUX OUT PARAMETER

This parameter turns on and off the AUX socket on the PCB. The choices available for this parameter are:

>**OFF**: AUX socket switched off.

>**ON**: AUX socket switched on.

>**CANCEL**: Cancel editing and leave the parameter unchanged.



## AUTO OFF

### THE AUTO POWER OFF TIME PARAMETER

The time that has to elapse before the Ego10 switches itself off if not used. The parameter can be set between 5 and 20 minutes.



## TRAINING

### THE TRAINING PARAMETER

The *TRAINING* parameter is used to select Training mode. In Training mode the Ego10 will function exactly the same as normal but with two important differences:

1. The solenoid valve is not driven so the bolt does not move and does not release a burst of air. Instead the beeper will sound for each pull of the trigger. This simulates the firing cycle without wasting air and generating lots of noise.
2. The BBSS is overridden so that the Ego10 can cycle without paint. The centre of the BBSS indicator changes to a 'T' to indicate that Training mode is enabled.

The *TRAINING* parameter choices are as follows:

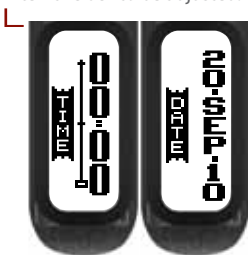
- > **OFF:** Training mode is disabled and the Ego10 functions normally.
- > **ON:** Training mode is enabled.
- > **CANCEL:** Cancel editing and leave the parameter unchanged.



## CLOCK

### THE CLOCK MENU (SELECTED MODELS ONLY)

The *CLOCK* menu allows the time and date on the Ego10's internal clock to be adjusted.



## TIME

### THE TIME PARAMETER

The *TIME* parameter allows for adjustment of the 24hr clock.



## DATE

### THE DATE PARAMETER

The *DATE* parameter allows for adjustment of the day, month and year.



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# ADVANCED SET-UP

## SHOT COUNT THE SHOT COUNT MENU

The *SHOT COUNT* menu allows the user to alter the shot gauge that appears in the shot count run screen.



## GAUGE THE GAUGE PARAMETER

The *GAUGE* parameter allows the user to toggle the gauge graphic on and off, in the shot counter run screen.

The choices for the *GAUGE* parameter are:

- > **OFF:** Gauge graphic on the shot count run screen is disabled.
- > **ON:** Gauge graphic on the shot count run screen is enabled.
- > **CANCEL:** Cancel editing and leave the parameter unchanged.



## GAUGE MAX THE GAUGE MAX PARAMETER

The *GAUGE MAX* parameter allows the user to set the number the gauge counts down from every time the Ego10 is fired. The user can set the gauge from 100 to 2000 in increments 10.



## TIMER

### THE GAME TIMER MENU

This menu is comprised of parameters that control the operation of the Game Timer.



## GAME

### THE GAME TIME PARAMETER

This parameter is used to set the game time; the time from which the game timer counts down to zero. This parameter can be set between 00:00 and 60:00 minutes in 10 second increments and the factory default is 07:10 (7 minutes 10 seconds).

When the game timer reaches 00:00, **GAME OVER** will be displayed and the audible alarm will sound continually, provided that the *SOUND* parameter is set to 'ON'.



## ALARM

### THE ALARM TIME PARAMETER

An alarm condition is generated whenever the game timer counts down to a specific time set by the *ALARM* parameter. This parameter can be set between 00:00 and 10:00 minutes in 10 second increments.


When the alarm condition is generated the game timer will start to flash and the audible alarm will sound every second, provided that the *SOUND* parameter is set to 'ON'.



## START

### THE TIMER START PARAMETER

This parameter is used to select the event which will cause the game timer to begin counting down. This parameter has the following choices:

- > **BUTTON:** Pressing the  button will start the game timer.
- > **TRIGGER:** Pulling the trigger will start the game timer.
- > **CANCEL:** Cancel editing and leave the parameter unchanged.



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

## CLEANING THE BREAK BEAM SENSOR SYSTEM

**⚠ WARNING //////////////////////////////////////**

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

Undo the retaining screw for the break beam sensor cover on the left hand side of the Ego10 using a 5/64" (2mm) hex key (SEE FIGURE 9.1).

Remove the sensor cover to expose the back of the break beam sensor unit (SEE FIGURE 9.2). Using a dry cotton bud, carefully remove any debris, paint or moisture from the back of the sensor unit and from inside the sensor cover.

Lift the BBSS free from the Ego10 body and using another dry cotton bud, remove any grease or debris build-up from the front of the sensor unit (SEE FIGURE 9.3).



FIG 9.1



FIG 9.2



FIG 9.3



## (CONTINUED)

Remove the rubber detent and using a dry cotton bud clean the detent and it's location point in the Ego10 Body. (SEE FIGURE 9.4) Replace the detent back into the Ego10 body (SEE FIGURE 9.5) and place the BBSS back into the designated slot in the body (SEE FIGURE 9.2). Ensure that the sensor is face down in the body i.e. looking into the breach.

Replace the sensor cover and using a 5/64" hex key, replace the bream beam sensor cover retaining screw to hold the sensor cover in place (SEE FIGURE 9.6).

Repeat the procedure for the opposite side of the Ego10.

You have now cleaned your break beam sensor system.

**NOTE:** WHEN CLEANING THE BREAK BEAM SENSOR SYSTEM INSPECT THE 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 9.4



FIG 9.5



FIG 9.6

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

MAINTENANCE

**⚠ WARNING** ///////////////////////////////////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**

## CLEANING THE INLINE REGULATOR

**⚠ WARNING** //////////////////////////////////////////////////////////////////

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

**NOTE: THE INTERNALS OF YOUR INLINE REGULATOR MAY VARY ACCORDING TO THE MODEL OF EGO10 THAT YOU HAVE.**

Disconnect the macroline hosing from your inline regulator allowing it to be unscrewed from the front regulator mount (FRM) (**SEE FIGURE 10.1**).

Turn the inline regulator upside down and carefully unscrew the two sections (**SEE FIGURE 10.2**). These can be unscrewed by hand or using a 3/8 hex key in the top and a 5/16 hex key in the bottom of the inline regulator.

By firmly gripping the exposed end of the inline regulator piston, carefully remove the piston and spring in its entirety (**SEE FIGURE 10.3**).

Insert a 1/8" 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 10.4**) and pull free when it will no longer turn upwards anymore.

**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.**

Using a dry cotton bud, clean the O11 NBR 70 o-ring that sits inside the top of the bottom section of the inline regulator (**SEE OVERLEAF FIGURE 10.5**). Using Eclipse Gun Oil and a fresh cotton bud, re-lubricate the seal ready for re-assembly.



**FIG 10.1**



**FIG 10.2**



**FIG 10.3**



**FIG 10.4**

## (CONTINUED)

Thoroughly clean the two 008 NBR 70 o-rings on the adjuster screw and lubricate ready for re-assembly. Inspect the top face of the adjuster unit for any excessive wear or damage as this could cause the inline regulator to creep (SEE FIGURE 10.6).

**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 10.7). Apply light pressure to the top of the adjuster screw and using a 1/8" hex key wind the adjuster screw counter-clockwise until it stops at the base of the regulator body. Turn the adjuster screw 4 turns in a clockwise direction to set the inline regulator pressure at approximately 160 psi.

Take the piston and spring and clean the seal at the top of the piston, re-lubricating it with a light smear of Eclipse Grease ready for re-assembly (SEE FIGURE 10.8). Insert the piston and spring into the top half of the inline regulator body (SEE FIGURE 10.9).

**⚠ WARNING** //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

**WARNING: THE SPRING IN THE EGO10 INLINE REGULATOR HAS BEEN DESIGNED SPECIFICALLY FOR THE ECLIPSE EGO10. USING ANY OTHER SPRING WILL DAMAGE THE EGO10 AND VOID YOUR WARRANTY.**

Keeping the top half of the inline regulator upside down, screw the two halves of the inline regulator together (SEE FIGURE 10.10).

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

**NOTE:** IF ANY O-RINGS ARE DAMAGED THEN REPLACE THEM. EXTRA O-RINGS ARE AVAILABLE IN EGO10 PARTS KITS AVAILABLE ONLINE AT [WWW.PLANETECLIPSE.COM](http://WWW.PLANETECLIPSE.COM).



FIG 10.5



FIG 10.6



FIG 10.7



FIG 10.8



FIG 10.9



FIG 10.10

**⚠ WARNING** //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTRES

PARTS LIST

SPARES & ACCESSORIES

INDEX

MAINTENANCE

51.

# CLEANING THE LOW PRESSURE REGULATOR (LPR)

**⚠ WARNING** //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

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

**NOTE:** THE INTERNALS OF YOUR LPR MAY VARY ACCORDING TO THE MODEL OF EGO10 YOU HAVE.

The inline regulator can be removed if needs be.

Unscrew the LPR cap from the marker body (SEE FIGURE 11.1).

Remove the LPR piston and rear spring from the LPR cap (SEE FIGURE 11.2).

Cupping the palm of one hand, turn the LPR cap upside down and tip the front spring out into your palm (SEE FIGURE 11.3).

Remove the rear spring from the LPR piston and using a dry cotton bud, carefully clean the O13 NBR 70 o-ring on the LPR piston (SEE FIGURE 11.4). If the seal is damaged then replace it. Once the seal has been cleaned, lubricate with a light application of Eclipse Grease so that it is ready for re-assembly.

**NOTE:** THE ADJUSTER SCREW DOES NOT NEED TO BE REMOVED FROM THE LPR CAP FOR REGULAR MAINTENANCE.



**FIG 11.1**



**FIG 11.2**



**FIG 11.3**

**FIG 11.4**

## (CONTINUED)

Insert the front spring (silver in colour) into the LPR cap, so that it rests neatly on the adjuster screw (SEE FIGURE 11.5).

Place the gold coloured spring onto the LPR piston and insert piston and spring into the LPR cap, o-ring end first (SEE FIGURE 11.6).

Before screwing the LPR cap back onto your Ego10, use a dry cotton bud to clean the O10 NBR 70 o-ring inside the LPR body (SEE FIGURE 11.7). Lubricate this seal using a light gun oil, such as Eclipse Gun Oil.

Replace the LPR cap by screwing it onto the LPR body in the Ego10 (SEE FIGURE 11.8).



FIG 11.5



FIG 11.6

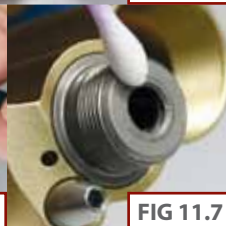


FIG 11.7



FIG 11.8

**⚠ WARNING** //////////////////////////////////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# MAINTENANCE

53.

## MAINTAINING THE RAMMER

**⚠ WARNING //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////**

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

Pull the bolt pin upwards so that it disengages the rammer, allowing the bolt to be removed via the rear of the Ego10 (SEE FIGURE 12.1).

Using a 3/16" hex key, unscrew and remove the rammer cap at the rear of the Ego10 (SEE FIGURE 12.2).

Raise the front of the Ego10 and tap the Ego10 onto your hand until the rammer falls into the palm of your hand (SEE FIGURE 12.3).

Thoroughly clean the rammer shaft and all of its seals, paying special attention to the 009 NBR 70 o-ring on the middle of the shaft (SEE FIGURE 12.4), the rear 011 NBR 70 o-ring (SEE FIGURE 12.5) and the condition of the rammer bumper cushion in the rammer cap (SEE FIGURE 12.6 OVERLEAF).

Replace any worn seals/bumpers using authentic Eclipse Ego10 spare parts.



FIG 12.1



FIG 12.2



FIG 12.3



FIG 12.4



FIG 12.5

## (CONTINUED)

Lubricate all of the seals on the rammer shaft and inside the rammer cap and replace the rammer into the rear of the Ego10 body as shown in (SEE FIGURE 12.7).

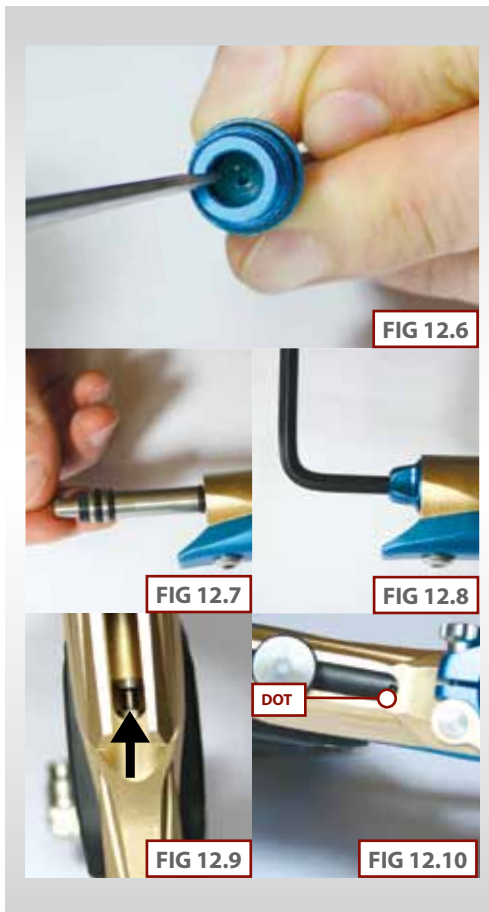
**NOTE:** DO NOT USE ECLIPSE GREASE ON THE RAMMER. ONLY USE LIGHT PAINTGUN OIL, WE RECOMMEND ECLIPSE GUN OIL.

Replace the rammer cap, using the 3/16" hex key to secure it into the Ego10 body (SEE FIGURE 12.8).

**NOTE:** DO NOT OVER TIGHTEN THE RAMMER CAP SCREW.

Noting the position of the rammer in the Ego10 body (SEE FIGURE 12.9), replace the bolt and locate the bolt pin into the designated groove in the rammer shaft using the dot on the bolt as a reference guide (SEE FIGURE 12.10).

**NOTE:** THE NUMBER OF O-RINGS ON THE RAMMER MAY VARY ACCORDING TO THE MODEL OF EGO10 THAT YOU HAVE.



**⚠ WARNING** //////////////////////////////////////////////////////////////////

**WARNING:** IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# MAINTENANCE

55.

## CLEANING AND LUBRICATING THE BOLT

**⚠ WARNING** //////////////////////////////////////////////////////////////////

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

Raise the bolt pin and remove the bolt and bolt pin from the Ego10 marker body (**FIGURE 13.1**).

Using a dry cotton bud remove any paint or grease from the surface of the bolt (**SEE FIGURE 13.2**).

Lubricate the detent slots on either side of the bolt with gun oil, ensuring that a drop of oil is placed on the o-rings at the point where they cross the detent slots (**SEE FIGURE 13.3**). Replace the bolt, locking the bolt pin into the designated slot in the rammer using the dot on the bolt as a reference guide (**SEE FIGURE 13.4**).

**NOTE: WE RECOMMEND THE USE OF ECLIPSE GUN OIL ON THE EGO10 RAMMER AND BOLT.**



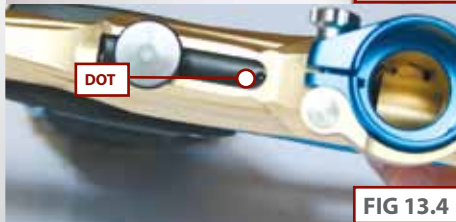
**FIG 13.1**



**FIG 13.2**



**FIG 13.3**



**FIG 13.4**



# REMOVING THE FRAME

## ⚠ WARNING //////////////////////////////////////

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

Disconnect any hosing and unscrew the inline regulator from the front regulator mount as detailed in the *Cleaning the Inline Regulator* section of this maintenance guide (pages 50-51).

Using a 5/64" hex key remove the six screws that attach the Ego10 rubber grips to the Ego10 grip frame (SEE FIGURE 14.1). Unplug the solenoid and unplug the break beam sensor system from their connections on the Ego10 circuit board (SEE FIGURE 14.2).

Using a 1/8" hex key undo the two frame retaining screws (SEE FIGURE 14.3) and remove the frame from the Ego10 body, taking care not to damage any wires (SEE FIGURE 14.4).

You have now removed the frame.

## ⚠ WARNING //////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**



FIG 14.1



FIG 14.2



FIG 14.3



FIG 14.4

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

MAINTENANCE

## ATTACHING THE FRAME

**⚠ WARNING //////////////////////////////////////**  
**WARNING: DE-GAS YOUR MARKER, DISCHARGING ANY STORED GAS IN A SAFE DIRECTION, AND REMOVE THE BARREL, LOADER, AIR SYSTEM AND ANY PAINTBALLS TO MAKE THE MARKER EASIER AND SAFER TO WORK ON.**

Carefully thread the solenoid and break beam sensor system wires through the access holes in the top of the Ego10 grip frame (SEE FIGURE 14.5) and re-attach the grip frame to the marker body by tightening the two grip frame screws using a 1/8" hex key (SEE FIGURE 14.6).

Ensure that the break beam sensor system cables lie neatly in the slots provided for them in the Ego10 grip frame and connect the solenoid and the break beam sensors to their relevant connections on the Ego10 circuit board (SEE FIGURE 14.7). Adjust both the solenoid wires and the break beam sensor system wires so that they sit neatly within the grip frame (SEE FIGURE 14.8).

Re-attach the Ego10 rubber grips to the frame by using a 5/64" hex key to replace the 6 grip screws.



FIG 14.5



FIG 14.6



FIG 14.7



FIG 14.8

# THE EGO10 TRIGGER ASSEMBLY

## ⚠ WARNING //////////////////////////////////////

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

Having removed the trigger frame completely from the Ego10 body (see page 57) hold the bearing carrier in place in the top of the frame (SEE FIGURE 15.1). Gently lift the bearing carrier and trigger assembly free from the frame taking care not to damage the micro-switch or the Opto sensors (SEE FIGURE 15.2).

Using a 1/16" hex key, loosen the trigger pin retaining set screw from the bottom of the trigger (SEE FIGURE 15.3). Use a small hex key to push the trigger pin out of the bearing carrier from one side (SEE FIGURE 15.4).

Clean the trigger and bearing carrier thoroughly and also clean the space within the frame that the trigger sits into.

Carefully remove the trigger spring from the spring hole in the top of the trigger and clean off any paint debris or moisture from it (SEE FIGURE 15.5).

## ⚠ WARNING //////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**



FIG 15.1



FIG 15.2



FIG 15.3



FIG 15.4



FIG 15.5

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

MAINTENANCE

## (CONTINUED)

Replace the trigger spring into the spring hole in the top of the trigger and position the trigger so that the hole through the trigger lines up with the holes in the bearing carrier, slide the trigger pin in place (**SEE FIGURE 15.6**).

Gently lower the trigger assembly and bearing carrier into the frame, taking care not to damage the micro-switch or the Opto sensor, and ensuring that the trigger is positioned correctly (**SEE FIGURE 15.7**). Using a 5/64" hex key tighten the two screws that hold the bearing carrier in place in the top of the Ego10 frame (**SEE FIGURE 15.8**). Using a 1/16" hex key tighten down the trigger pin retaining set screw (**SEE FIGURE 15.9**).

**NOTE:** DO NOT FULLY TIGHTEN THE TRIGGER PIN RETAINING SCREW UNTIL THE BEARING CARRIER HAS BEEN SECURED IN THE FRAME. THIS IS TO ENSURE THE TRIGGER PIN IS CORRECTLY LINED UP AGAINST THE SIDE WALL OF THE FRAME.

You have now stripped and cleaned your Ego10 trigger assembly.



FIG 15.6



FIG 15.7



FIG 15.8



FIG 15.9

# THE EGO10 SOLENOID ASSEMBLY

## ⚠ WARNING //////////////////////////////////////

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

With the frame separated from the Ego10 body and the solenoid assembly and BBSS assembly unplugged from the circuit board (see page 57) use a 5/64" hex key to undo and remove the two screws that hold the solenoid assembly onto the Ego10 body (SEE FIGURE 16.1).

With the solenoid assembly completely removed from the Ego10 body the bottom of the Ego10 body should now resemble FIGURE 16.2 Ensure that the air transfer holes in the bottom of the body are free from contamination from any dirt, debris, paint or moisture and clear away any excess grease if it appears to be blocking any of the transfer holes.

Check the underside of the solenoid assembly to ensure that it is also free from damage or debris (SEE FIGURE 16.3). Remove and clean the rubber gasket as shown in FIGURE 16.4. Replace the rubber gasket ensuring that it lies flat in its designated groove in the solenoid manifold body (SEE FIGURE 16.5).

If you are replacing a defective pilot valve, unscrew it from the solenoid manifold and replace it with a new pilot valve unit (SEE FIGURE 16.6).

## ⚠ WARNING //////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# MAINTENANCE

## (CONTINUED)

Using a 5/64" hex key remove the Spool cap and spring (SEE FIGURE 16.7). Remove the Spool shaft using a pair of needle-nosed pliers as shown in SEE FIGURE 16.8. Clean the spool shaft using a cloth to wipe off any paint, debris or old grease and lubricate all of the o-rings on the spool shaft with Eclipse Grease before re-inserting it (SEE FIGURE 16.9). Replace the Spool spring then Spool cap using a 5/64" hex key to secure them in place (SEE FIGURE 16.10).

Hold the solenoid assembly onto the bottom of the Ego10 body taking care to line it up correctly with the screw holes in the body and to avoid pinching the BBSS wires underneath it. Use a 5/64" hex key to tighten the two screws that hold the solenoid assembly onto the Ego10 body (SEE FIGURE 16.11).

You have now successfully stripped and cleaned your Ego10 solenoid assembly.



FIG 16.7



FIG 16.8



FIG 16.9



FIG 16.10



FIG 16.11

# REMOVING THE VALVE ASSEMBLY

## ⚠ WARNING //////////////////////////////////////

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

Lift the bolt pin and slide the bolt out of the rear of the marker. Disconnect any hosing and unscrew the inline regulator from the front regulator mount as detailed in the *Cleaning the Inline Regulator* section of this maintenance guide (page 50-51). Remove the frame as detailed on page 57.

Take the Ego10 body and turn it so that the underside of the solenoid assembly, and valve plug are visible and accessible (SEE FIGURE 17.1). Using a 1/8" hex key remove the screw from the front regulator mount that holds the LPR body into the marker body (SEE FIGURE 17.2).

Remove the entire LPR assembly, the valve spring and the exhaust valve from the marker body (SEE FIGURE 17.3). Using a 1/8" hex key remove the valve plug from the underside of the Ego10 body (SEE FIGURE 17.4). The bottom of the exhaust valve guide should now be visible through the valve plug hole (SEE FIGURE 17.5). Ensure that the rammer is in its rear position and taking an L-shaped hex key, place it down through the bolt slot in the top of the body so that you can apply light pressure to pop the valve guide out of its place in the Ego10 body (SEE FIGURE 17.6).

## ⚠ WARNING //////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**



FIG 17.1



FIG 17.2

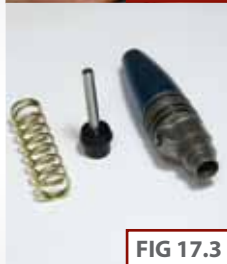


FIG 17.3



FIG 17.4



FIG 17.5



FIG 17.6

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# MAINTENANCE

## (CONTINUED)

Note how one side of the exhaust valve guide is flat (A) whilst the other is raised (B) to create the surface that the exhaust valve seals on (SEE FIGURE 17.7). Inspect the sealing face of both the exhaust valve guide and the exhaust valve for any excessive wear or damage. If either the exhaust valve or the exhaust valve guide are damaged then replace with authentic Ego10 parts.

Lubricate both of the o-rings on the exhaust valve guide with Eclipse Gun Oil (SEE FIGURE 17.8). Lubricate the o-rings on the LPR body with Eclipse Gun Oil (SEE FIGURE 17.9).

Place the exhaust valve in the exhaust valve guide, making sure that the sealing faces are next to each other, and place the valve spring over the end of the exhaust valve and then place this sub-assembly over the LPR body (SEE FIGURE 17.10).

**NOTE:** MAKE SURE THE LARGER DIAMETER FRM SCREW HOLE ON THE LPR BODY AND THE BLOCKED SIDE OF THE EXHAUST VALVE GUIDE ARE IN LINE WITH EACH OTHER BEFORE INSERTING THE PART STACK INTO THE EGO10.

Holding the LPR assembly so that the larger hole on the LPR body is facing the bottom of the marker body, insert the valve assembly, valve spring and LPR assembly into the front of the marker body (SEE FIGURE 17.11).



FIG 17.7

FIG 17.8



FIG 17.9



FIG 17.10

FIG 17.11



## (CONTINUED)

When the exhaust valve is in the correct place, you will be able to see the closed side through the valve plug hole in the Ego10 body (SEE FIGURE 17.12).

Using a 1/8" hex key replace the FRM screw that secures the LPR body into the marker body (SEE FIGURE 17.13).

**NOTE:** ENSURE THAT THE LPR BODY IS IN THE CORRECT ORIENTATION BEFORE ATTEMPTING TO REPLACE THE FRM SCREW. THE LARGER OF THE TWO HOLES ON THE LPR BODY SHOULD BE AT THE BOTTOM WHEN ALIGNING THE HOLES WITH THE EGO10 BODY.

Make sure that the exhaust valve guide is lined up correctly and then take a 1/8" hex key and replace the valve plug (SEE FIGURE 17.14).

You have now successfully stripped and cleaned your Ego10 valve assembly. See page 58 on how to attach the Ego10 frame.



FIG 17.12



FIG 17.13



FIG 17.14

**⚠ WARNING** //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

MAINTENANCE

## THE EGO10 ON/OFF PURGE SYSTEM (OOPS)

**⚠ WARNING //////////////////////////////////////////////////////////////////**

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

Having disconnected the macroline hose from the fitting on the OOPS body, unscrew the OOPS knob from the OOPS body (SEE FIGURE 18.1). Clean off any dirt, debris or moisture from the OOPS knob and the threaded section of the OOPS body.

Use an appropriately sized hex key to push the OOPS pin out of the OOPS body (SEE FIGURE 18.2) and then remove the OOPS insert using a pair of needle nosed pliers (SEE FIGURE 18.3).

Clean and check the condition of the two 008 NBR70 o-rings on the outside of the OOPS insert, replacing as necessary (SEE FIGURE 18.4).



FIG 18.1

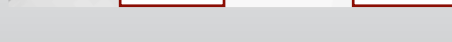


FIG 18.2



FIG 18.3

FIG 18.4



## (CONTINUED)

Clean and check the condition of the single internal 006 NBR90 o-ring in the front of the OOPS insert, replace if necessary (SEE FIGURE 18.5). Lubricate all three of these o-rings liberally using Eclipse Grease (SEE FIGURE 18.6).

Replace the OOPS insert into the OOPS body ensuring that the o-ring end goes in first, pushing it into place (SEE FIGURE 18.7).

Lubricate the narrow end of the OOPS pin with a smear of Eclipse Grease and push the pin, narrow end first, into the OOPS body so that it sits in the OOPS insert and pokes through the front of the OOPS body (SEE FIGURE 18.8).

Screw the OOPS knob back onto the OOPS body until only a couple of threads are showing (SEE FIGURE 18.9).

Reconnect the macroline hose to the fitting on the OOPS body (SEE FIGURE 18.10).

You have now successfully cleaned and maintained your On/Off purge system.



FIG 18.5



FIG 18.6



FIG 18.7



FIG 18.8



FIG 18.9



FIG 18.10

**⚠ WARNING** //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

**WARNING: IF YOU ARE AT ALL UNSURE OF PERFORMING THE MAINTENANCE PROCEDURE PLEASE CONTACT YOUR NEAREST ECLIPSE SERVICE CENTRE. (SEE PAGES 72-73)**

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

MAINTENANCE

67.

# FAULT FINDING

68.



**⚠ WARNING** //////////////////////////////////////////////////////////////////

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

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Although a fresh battery has been fitted, the Ego10 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 lithium battery. Do not use a low quality or rechargeable battery.
The Ego10 leaks from the solenoid.	The gasket is damaged and/or not seated correctly in its designated pocket in the solenoid body.	Replace the gasket if damaged using Ego10 parts kit. Ensure the gasket is seated correctly.
	Damaged Ego10 solenoid.	Replace Ego10 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.
	Solenoid Spool shaft is damaged or dirty.	Clean or replace if required.
	Damaged or incorrect seals on rammer.	Replace seals.
	It is leaking from the barbs.	Check hose for cuts or replace barbs.
It is over-pressurizing from damaged seals on the LPR body.	Change LPR body seals.	
The Ego10 leaks down the barrel.	Leaky exhaust valve.	Replace exhaust valve.
	Damaged exhaust valve guide.	Replace exhaust valve guide and o-rings.
Gas vents quickly down barrel as soon as it is gassed up.	Incorrect seal on front of exhaust valve guide.	Replace front seals on exhaust valve guide with 013 NBR70.
	The exhaust valve has become jammed in the exhaust valve guide.	Replace exhaust valve and exhaust valve guide as necessary (see Maintenance section).

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

**FAULT FINDING**

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# FAULT FINDING



# FAULT FINDING

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
The marker is chopping or trapping paint.	The break beam sensor system is switched off.	Switch on the break beam sensor system.
	The bolt is dirty, causing the sensor system to incorrectly detect a paintball.	Clean the bolt.
	The break beam sensor system is dirty causing the incorrect detection of paintballs.	Clean the break beam sensor system.
	The Dwell parameter is set too low.	Increase the Dwell parameter.
The Ego10 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).
The Ego10 does not fire.	Trigger is set up incorrectly.	Set trigger up correctly. (See Advanced Set-Up Section)
	Solenoid is not plugged into the Ego10 PCB.	Plug solenoid into port on the Ego10 PCB.
	The break beam sensor system is enabled but there is no paint.	Fill loader with paint.
	Micro-switch is not being activated.	Adjust Micro-switch activation screw accordingly.
	Micro-switch is damaged.	Replace circuit board.
	Solenoid pilot valve is damaged.	Replace pilot valve.
Low velocity first shot.	FSD Comp parameter is too low to overcome stiction on solenoid and / or rammer O-rings.	Increase FSD Comp parameter.
High velocity first shot.	FSD Comp parameter set too high.	Reduce FSD Comp parameter.
	Inline regulator pressure is creeping.	Strip and clean inline regulator. Replace inline regulator piston if necessary.
The trigger very "bouncy".	Incorrect filter settings.	Check that your trigger filter and debounce settings suit your trigger set-up.
	Trigger pull too short and return strength too low.	Refer to Advanced Set-Up section for guidelines of how to adjust your Ego10 trigger accordingly.

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
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 breach.
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 breach sensor 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 breach.	If the Ego10 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.
Ego10 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 rammer shaft seal deteriorated.	Replace front rammer shaft seal.
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 Ego10 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.
The Ego10 leaks out of the LPR body vent hole (small hole below the LPR assembly on the Ego10 body).	The two rear 14x2 o-rings on the LPR body are damaged.	Replace both rear o-rings with new 14x2 NBR70 o-rings.

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

**FAULT FINDING**

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# 71. FAULT FINDING



## ECLIPSE CERTIFIED SERVICE CENTRES

Are you unsure of where to send your Ego10 to be repaired or serviced? If your local Eclipse dealer can't assist you, why not contact your nearest Certified Eclipse Service Centre and arrange to send it into them to undertake any work that you require.

### UNITED KINGDOM & EUROPE

#### PLANET ECLIPSE LTD

United Kingdom  
Call: +44(0)161 872 5572  
Email: technical@planetecclipse.com  
Visit: www.planeteclipse.com

#### P8NTBALL.BE

Belgium  
Call: +32(0)499-057878  
Email: info@p8ntball.be  
Visit: www.paintball.be

#### AGS

Czech Republic  
Call: ++420 272 762 938  
Email: info@paintballshop.cz  
Visit: www.paintballshop.cz

#### CAMP

France  
Call: +33(0)1 41 09 1004  
Email: atelier@paintballcamp.com  
Visit: www.paintballcamp.com

#### COOLGAMES

Finland  
Call: ++358 9 586 5312  
Email: mikke@ahaa.fi  
Visit: www.coolgames.fi

#### PAINTBALL.DE

Germany  
Call: ++49(0) 211 210 2300  
Email: salesforce@paintball.de  
Visit: www.paintball.de

#### PAINTBALLNORGE AS

Norway  
Call: ++47 3802 9710  
Email: post@paintballnorge.no  
Visit: www.paintballnorge.no

#### SKILL PAINTBALL

Poland  
Call: ++48 22 875 2777  
Email: info@skill.com.pl  
Visit: www.skill.com.pl

#### ESTRATEGO PORTUGAL

Portugal  
Call: ++351 213 863 637  
Email: info@estratego.pt  
Visit: www.estratego.com

#### PONTO DE MIRA

Portugal  
Call: ++351 214 120 144  
Email: paintball@pontodemira.com  
Visit: www.pontodemira.com

#### ACTION PAINTBALL GAMES

Russia  
Call: +7(0) 95 7851 762  
Email: info@paintball.ru  
Visit: www.paintball.ru

#### DOC'S TECH

Russia  
Call: +7 911 9496969  
Email: doc.bo@mail.ru

#### ADRENALICIA S.L.

Spain  
Call: ++34 669 011 515  
Email: jota@adrenalicia.com  
Visit: www.adrenalicia.com

#### SISSOS

Scandinavia  
Call: +358 9 85590093  
Email: hasse@paintball.se  
Visit: www.sissos.fi

#### STRATEC

Sweden  
Call: +46 (0)31 164871  
Email: info@stratec.nu  
Visit: www.stratec.nu

#### THREE 4 ONE

Switzerland  
Call: +41 (0)79 445 24 12  
Email: shop@341.ch  
Visit: www.341.ch



## USA AND CANADA

### PLANET ECLIPSE LLC

Rhode Island  
Call: (401) 247 9061  
Email: gerry.b@planetecclipse.com  
Visit: www.planetecclipse.com

### BADLANDS PAINTBALL

Canada  
Call: (416) 245 3856  
Email: techzone@badlandspaintball.com  
Visit: www.badlandspaintball.com

### DISRUPTIVE PAINTBALL

Arizona  
Call: (520) 320 0333  
Email: disruptivepaintball@yahoo.com  
Visit: www.disruptivepaintball.com

### DGX PAINTBALL

West Coast and California  
Call: (707) 255 5166  
Email: Darin@dgxpaintball.com  
Visit: www.dgxpaintball.com

### EXTREME SKATE AND PAINT

Florida and South America  
Call: (305) 235 2311  
Fax: (305) 235 2312  
Email: mikecanto1@msn.com  
Email: pjballin@hotmail.com  
Visit: www.espsports.net

### GROUND ZERO PAINTBALL

Southern States  
Call: (888) 759 2578  
Email: egdesigns@hughes.net  
Visit: www.gzpaintball.com

### MOUNTAIN VIEW PAINTBALL

California  
Call: (909) 373 0998  
Email: mvpsteve@mountainviewpaintball.com  
Visit: www.mountainviewpaintball.com

### PAINTBALL CENTRAL

North Carolina  
Call: (336) 274 4002  
Visit: www.pbballcentral.com

### PAINTBALL SHOWCASE

East Coast  
Call: (401) 353 6040  
Email: paintballsupply@aol.com  
Visit: www.paintballshowcase.com

### PRO SHOP PAINTBALL

Texas  
Call: (210) 523 5000  
Email: proshoppaintball@sbcglobal.net  
Visit: www.proshoppaintball.com

### PRO STAR PAINTBALL

Midwest  
Call: (402) 403 1880  
Email: Walt@prostarpb.com  
Visit: www.prostarpb.com

### WARPAINT INTERNATIONAL

Oregon  
Call: (503) 585 9477  
Email: info@warpaintpb.com

## REST OF WORLD

### ACTION PAINTBALL GAMES

Australia  
Call: ++61 2 9679 0011  
Email: sales@actionpaintball.com.au  
Visit: www.actionpaintball.com.au

### BRAZIL'S MOST WANTED PAINTBALL

Brazil  
Call: 55-61-8406-5781  
Fax: 55-61-3345-1664  
Email: andreobarros@gmail.com  
Visit: www.bmwpaintball.com

### MEGA PLAY MORUMBI PAINTBALL

Brazil  
Call: (11) 3771-2969  
Email: paintball@megaplaymorumbi.com.br  
Visit: www.megaplaymorumbi.com.br

### EL 2NEL

Chile  
Call: (56+2) 8393852  
Email: mlobos@2nel.cl  
Visit: www.2nel.cl

### FAST DUCKS PAINTBALL

Colombia  
Call: 7119410-2382922  
Email: Ariel@fastduckspaintball.com  
Visit: www.fastduckspaintball.com

### SKIRMISH PAINTBALL ASIA

Malaysia  
Call: ++603 7722 5629  
Email: info@skirmishpaintballasia.com  
Visit: www.skirmishpaintballasia.com

### EXTREME SPORTS MEXICO

Mexico  
Cell: 619-392-8563  
Call USA: 619-567-6141  
Call Mexico: 664-630-8742  
Email: jacuzzi9@hotmail.com

### THE PAINTBALL SHOP

South Africa  
Call: ++27 413640549  
Email: info@paintballshop.co.za  
Visit: www.paintballshop.co.za

### VIPER PAINTBALL SUPPLY

Venezuela  
Call: 584122060751  
Email: vipertcps@hotmail.com

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO 10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

SERVICE CENTERS

# PARTS LIST



## PART NAME

- |                              |                                     |                                    |
|------------------------------|-------------------------------------|------------------------------------|
| 01 Valve Guide               | 28 9V Battery                       | 55 Bolt O-Ring                     |
| 02 Valve Plug                | 29 Frame                            | 56 Clamping Feed Tube              |
| 03 Valve Spring              | 30 Trigger                          | 57 Clamping Feed Screw             |
| 04 Exhaust Valve Assembly    | 31 Printed Circuit Board            | 58 Body                            |
| 05 Rammer Cap                | 32 Bearing Carrier                  | 59 1/4" Elbow                      |
| 06 Rammer Cap O-Ring         | 33 Trigger Adjuster Screw           | 60 1/4" Hose                       |
| 07 Rammer                    | 34 Trigger Pin Locking Screw        | 61 OOPS Body                       |
| 08 Front Rammer O-Ring       | 35 Push Button Strip                | 62 OOPS Pin                        |
| 09 Rammer Bumper O-Ring      | 36 Display Window                   | 63 OOPS On/Off Knob                |
| 10 Rear Rammer O-Ring        | 37 PCB Screw                        | 64 OOPS Insert                     |
| 11 Pilot Valve               | 38 LCD Module                       | 65 OOPS Adjuster Screw             |
| 12 Solenoid Assembly         | 39 Navigation Console               | 66 OOPS Insert External O-Ring     |
| 13 Barb                      | 40 Frame Screw                      | 67 OOPS Insert Internal O-Ring     |
| 14 Solenoid Retaining Screw  | 41 Trigger Pin                      | 68 Inline Regulator Swivel O-Rings |
| 15 Low Pressure Hose         | 42 Inline Regulator Swivel          | 69 Valve Guide O-Rings             |
| 16 Torpedo                   | 43 Inline Regulator Top             | 70 Bolt Plunger                    |
| 17 LPR Cap                   | 44 Inline Regulator Top O-Ring      | 71 Bolt Spring                     |
| 18 LPR Adjuster Screw        | 45 Inline Regulator Bottom          | 72 Zick 2 Rammer Cushion           |
| 19 LPR Adjuster Screw O-Ring | 46 Inline Regulator Bottom O-Ring   | 73 Bolt Insert                     |
| 20 LPR Adjuster Spring       | 47 Inline Regulator Piston          | 74 Bolt Insert O-Ring              |
| 21 LPR Piston                | 48 Inline Regulator Piston O-Ring   | 75 Clamping Feed Sprocket Screw    |
| 22 LPR Piston O-Ring         | 49 Inline Regulator Spring          |                                    |
| 23 LPR Piston Spring         | 50 Inline Regulator Adjuster Screw  |                                    |
| 24 LPR Body                  | 51 Inline Regulator Adjuster O-Ring |                                    |
| 25 LPR Body External O-Ring  | 52 Anti-Double Ball Finger          |                                    |
| 26 LPR Body Internal O-Ring  | 53 Bolt                             |                                    |
| 27 FRM Screw                 | 54 Bolt Pin                         |                                    |

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO 10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING















SERVICE CENTERS












PARTS LIST

SPARES & ACCESSORIES

INDEX

# PARTS LIST

SCREW	QTY	DESCRIPTION
	5	PCB SCREW (3), BEARING CARRIER SCREW (2) (M2.5 x5 CAP HEAD SOCKET)
	2	SOLENOID SCREW (2) (M2.5 x6 CAP HEAD SOCKET)
	8	RUBBER GRIP SCREW (6), BBSS COVERS SCREW (2) (6-32UNC x5/16 COUNTERSUNK SOCKET)
	1	SHORT FEED NECK SCREW (1 x10-32UNF x1/2 CAP HEAD SOCKET)
	1	CLAMPING FEED SPROCKET SCREW (CUSTOM MANUFACTURED)
	1	INLINE REGULATOR ADJUSTER SCREW (CUSTOM MANUFACTURED)
	1	MICRO-SWITCH SCREW (6-32 UNC x1/2 SOCKET SET SCREW)
	4	TRIGGER ADJUSTMENT SCREW (6-32 UNC x3/16 SOCKET SET SCREW)
	1	TRIGGER PIN RETAINING SCREW (6-32 UNC x1/8 SOCKET SET SCREW)
	2	OOPS SCREW (10-32 UNF x1/2 SOCKET SET SCREW)
	1	VALVE PLUG (CUSTOM MANUFACTURED)
	1	LPR ADJUSTER SCREW (CUSTOM MANUFACTURED)
	2	SHORT FRAME SCREW (10-32 UNF x3/8 SOCKET BUTTON HEAD)
	1	FRM RETAINING SCREW (CUSTOM MANUFACTURED)

O-RING	LOCATION	O-RING	LOCATION
 <b>016</b>	Inline Regulator Swivel Barrel Back LPR Body*	 <b>012</b>	Bolt insert
		 <b>011</b>	Back of the Rammer Rammer Cap Inline Regulator Bottom
 <b>015</b>	Inline Regulator Piston Inline Regulator Top (NBR 90) Barrel Front Bolt	 <b>010</b>	Inside LPR Body Inside Rammer Cap
		 <b>009</b>	Rammer Front Bumper Rammer Shaft
 <b>14x2</b>	LPR Body*	 <b>008</b>	OOPS Insert External Inline Regulator Adjuster Screw
 <b>013</b>	Valve Guide LPR Piston	 <b>007</b>	Torpedo LPR Adjuster Screw
		 <b>006</b>	OOPS Insert Internal (NBR 90)
<p><b>* = EITHER 016 OR 14x2 O-RINGS CAN BE USED ON THE LPR BODY DUE TO THE FACT THAT IT HAS TWO SEALING O-RINGS.</b></p> <p><b>ALL O-RINGS ARE NBR 70 DUROMETER UNLESS OTHERWISE STATED.</b></p>			

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

**PARTS LIST**

SPARES & ACCESSORIES

INDEX

# PARTS LIST

77.

### ECLIPSE GUN OIL

The recommended oil for use in all maintenance and servicing procedures that require oil.



### ECLIPSE GREASE

The recommended grease for use in all maintenance and servicing procedures that require grease.



### TECH FLEX MAT

Protect your Ego10 whilst you maintain it with the Eclipse Tech Flex Mat.



### EGO10 COMPREHENSIVE SPARES KIT

Replacement spares to service your Ego10. (Not all parts shown)



### BALL DETENTS

10 Replacement rubber Detents for your Ego10.



### ECLIPSE EGO10 TOOL TUBE

This handy little tool tube includes all of the hex key sizes that you will need to strip and maintain your Ego10.



### TECH SHIRT

The perfect pocket covered garment for carrying all those hex keys and spares for your Ego10.



### 09 GRAVEL PACK

Transport your Laptop in style with the new 09 Gravel Pack.



### 09 LOWLAND KITBAG

What better place to keep your Ego10?



### 09 HOODIES AND JACKETS

Eclipse winter warmers. Other colours and styles available.



### ECLIPSE SHAFT 3 BARREL BACKS

Different size barrel backs to suit different size paint. Available in .685 .689 bore sizes. Colour and size subject to availability.



### ECLIPSE GEO

The perfect companion for your Ego10. The Eclipse Geo is our new breed of paintball marker.



## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

# ACCESSORIES

79.

## INDEX

- ALARM.....33, 47
- Air System.....18, 20
- AUTO OFF.....32, 44
- AUX OUT.....26, 32, 44
- AUX OUT Indicator.....25, 26
- Actual Rate of Fire.....29
- BACK.....30 - 33
- BACKLIGHT.....32, 43
- Basic Trigger Filter Set-up.....42
- Advanced Trigger Filter Setup.....42
- Battery.....6, 15, 69, 75
- Battery Level Indicator.....25, 28
- Bearing Carrier.....59, 75
- Bearing Carrier Screw.....76
- BLU LEVEL.....32, 44
- Body.....6, 61, 63, 75
- Bolt.....6, 11, 54 - 56, 63, 70, 75, 77
- Bolt Insert.....11, 75, 77
- Bolt Pin.....6, 11, 54 - 56, 63, 70, 75
- Bolt Plunger.....11, 75
- Bolt Spring.....11, 75
- Break Beam Sensor System (BBSS).....17, 48-49, 57, 61, 70 - 71
- Break Beam Sensor System Indicator.....25, 26
- Breach.....13, 70
- BS OFF ROF.....26, 30, 37
- BS ON ROF.....30, 37
- CANCEL.....30, 31
- Clamping Lever.....6, 21, 75
- Circuit Board.....6, 16, 58, 75
- CLOCK.....33, 45
- Clock Display.....25
- DATE.....33, 45
- DBL CLICK.....32, 44
- DEBOUNCE .....31, 41
- Detent.....71, 75, 79
- DWELL.....31, 40, 70
- Eclipse Grease.....52, 55, 62, 67, 78
- Eclipse Gun Oil.....50, 53, 55 - 56, 78
- EMPTY.....31, 41
- Exhaust Valve.....6, 63 - 65, 69, 75
- Exhaust Valve Guide.....63 - 65, 69, 75
- EXIT.....33
- Eye Cover.....6, 75
- Eye Cover Screw.....6, 75
- FACTORY.....30
- Feedneck.....6, 21, 75
- FILTER.....31, 40
- FIRE MODE.....30, 37
- Frame.....6, 57 - 61, 75
- Front Regulator Mount (FRM).....50, 63
- Front Stop Trigger Screw.....22 - 23
- FRM Retaining Screw.....6, 75 - 76
- FSD COMP.....31, 40, 70
- FSD DELAY.....31, 40
- FULL.....32, 41
- GAME.....33, 47
- Game Timer.....28, 33
- GAUGE.....33, 46
- GAUGE MAX.....33, 46
- GRN LEVEL.....32, 44
- HARDWARE.....32, 42
- Inlet Barb.....10, 69
- Inline Regulator Adjuster Screw.....8, 50 - 51, 75 - 77
- Inline Regulator Assembly.....6, 8, 50 - 51, 70 - 71
- Inline Regulator Bottom.....8, 50 - 51, 75, 77
- Inline Regulator Piston.....8, 50 - 51, 70, 75, 77
- Inline Regulator Spring.....8, 50 - 5, 75
- Inline Regulator Swivel.....8, 77
- Inline Regulator Top.....8, 50 - 51, 75, 77
- KICK-IN.....31, 39
- LOAD.....30, 36
- Loader.....21
- Lock Indicator.....25, 28
- Low Pressure Regulator (LPR) Assembly.....9, 24, 52 - 53, 63 - 64, 69
- LINEAR.....31
- LPR Adjuster Screw.....9, 24, 52, 75 - 77
- LPR Adjuster Spring.....9, 52 - 53, 75
- LPR Body.....6, 9, 52 - 53, 63 - 64, 69, 75, 77
- LPR Body Vent Hole.....71
- LPR Cap.....6, 9, 52 - 53, 75
- LPR Piston.....9, 52 - 53, 69, 75, 77
- LPR Piston Spring.....9, 52 - 53, 75
- Macroline Elbow.....6, 19, 75
- Macroline Hose.....19, 75
- Magnet Return Strength Screw.....22 - 23



Main Menu.....30, 35  
Menu System.....29, 34  
Menu Tree.....30 – 33  
Micro-switch.....59 – 60, 70  
Micro-switch Activation Screw.....22 – 23, 70, 76  
MS 10.....30  
Navigation Console.....12, 75  
NPPL.....30  
On/Off Purge System (OOPS).....18, 20, 66  
OOPS Body.....6, 66 – 67, 75  
OOPS Insert.....6, 66 – 67, 75, 77  
OOPS Knob.....6, 66 – 67, 75  
OOPS Pin.....6, 66 – 67  
OOPS Screw.....6, 75 – 76  
Operational Overview.....13  
Opto Sensor.....59 – 60  
Parameters.....34  
PCB Screw.....76  
Peak Rate of Fire.....29  
Pilot Valve.....6, 10, 75  
PRESET.....30, 36  
PSP 10.....30  
PSP 12.....30  
PULL NO.....31  
PULL PT .....32, 41  
PULL TM.....32, 41  
Rammer.....6, 54 – 55, 63, 69, 71, 75, 77  
Rammer Cap.....6, 54 – 55, 75, 77  
RAMP.....30  
RAMP SET UP.....31, 38  
RATE.....31, 38  
Rear Stop Trigger Screw.....22 – 23  
RED LEVEL.....32, 43  
RELEASE PT.....32, 41  
RELEASE TM.....32, 41  
RESTART.....31, 39  
ROF CAP.....30, 37  
Rubber Gasket.....10, 61, 69  
Rubber Grip.....57, 58  
Rubber Grip Screw.....76  
Run Screen.....25  
SAVE.....30, 36  
SEMI.....30  
SEMI SHOTS.....39  
Shaft3 Barrel.....7, 79

SHOTCOUNT.....33, 46  
Shot Counter.....28, 71  
Solenoid Assembly.....6, 10, 61 – 63, 69, 75  
Solenoid Manifold.....10  
Solenoid Screw.....76  
SOUND.....32, 43  
Sound Indicator.....25, 27  
Spool Cap.....10, 62  
Spool Shaft.....10, 62, 69  
Spool Spring.....10, 62  
Spring Return Strength Screw.....22 – 23  
Sprocket Screw.....21, 75, 76  
START.....33, 47  
STEP.....31  
SUSTAIN.....31, 39  
TIME.....33, 45  
TIMER.....46  
TIMING.....31, 39  
TONES.....32, 43  
Torpedo.....6, 75, 77  
TRAINING.....33, 45  
Trigger.....6, 22, 59, 70 – 71, 75  
TRIGGER.....32, 43  
Trigger Adjustment Screw.....76  
Trigger Assembly.....59  
Trigger Detection Indicator (TDI).....25, 27  
Trigger Pin.....59, 75  
Trigger Pin Retaining Screw.....23, 59 – 60, 75 – 76  
Trigger Spring.....23, 59, 75  
T-Slot Mounting System.....19  
TURN OFF.....30  
TYPE.....31, 38  
USER1.....30  
USER2.....30  
User Interface.....25  
Valve Guide.....6, 75, 77  
Valve Plug.....63, 65, 75 – 76  
Valve Spring.....6, 63 – 64, 75  
Velocity.....24

## QUICK GUIDE

CONTENTS

ORIENTATION

QUICK SET-UP

USING YOUR EGO10

MENU TREE

ADVANCED SET-UP

MAINTENANCE

FAULT FINDING

SERVICE CENTERS

PARTS LIST

SPARES & ACCESSORIES

INDEX

INDEX

81.



GET MORE AT **PLANETECLIPSE.COM**

Units 5-8 Southfield Ind Est, Praed Road Trafford Park, Manchester, England, M171SJ  
Call UK & Europe: +44 (0)161 872 5572 Call USA & Canada: 401 247 9061

PRINTED IN CHINA  
E10M09VOL2

Licensed under one or more of the following patents:  
US 6311682, 6615814, 5881707, 5967133, 6035843, 6474326B1, 6637421B2 UK GB 234270, GB 2345953  
© 2009 Copyright Planet Eclipse Ltd. Eclipse, the Star Logo Device, Ego and Geo are all either design trademarks, registered trademarks or trademarks of Planet Eclipse Ltd.