



dyde®

ULTRALITE FRAME
AND STICKY GRIP



ULTRALITE FRAME

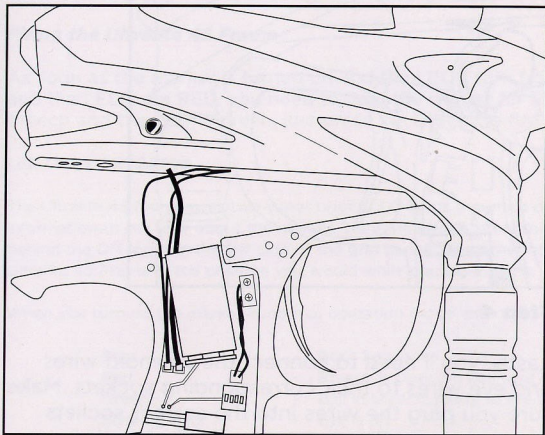
Revolutionary 45 Frame For The Matrix Series Of Markers

Introducing the most advanced and revolutionary 45 frame available in the world of paintball. The Ultralite 45 Frame is a culmination of professional player's influence mixed with progressive technological engineering. The new hour-glass shape allows for maximum control and comfort. Integrated heads-up display LED light alerts you to the status of your marker without taking your eyes off of the game. Our roller bearing trigger offers complete and total adjustment, helping you find your trigger's sweet spot. We've incorporated a bomb-proof button design. Our new rubber inset button tray houses two stainless steel buttons that allow the simplest of control, even with gloves on. Smoke Ultralite Sticky3 grip standard on the Ultralite 45 frame.

ULTRALITE FRAME - INSTALLATION INSTRUCTIONS

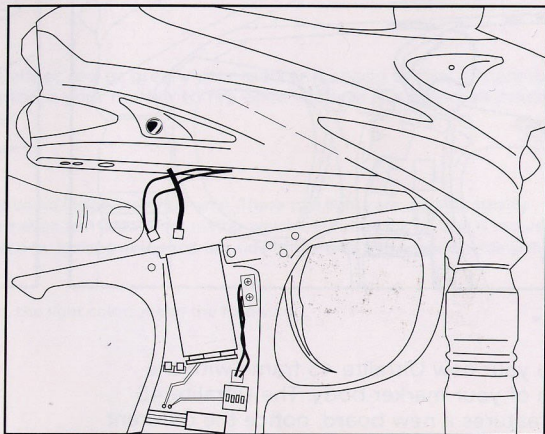
Before you can use your new Ultralite 45 frame, you will need to install the frame on your marker. Please follow the steps below to install the Ultralite 45 frame to your marker.

NOTE: The Ultralite 45 Frame only fits markers from the Matrix series. Specifically the DM4, DM5, DMC, Proto Matrix 5 and Proto Matrix 6. The Ultralite 45 Frame will fit the Shocktech® series of DM markers. Your marker must be one of the markers listed on the package in order for the frame to fit.



Step 1 -

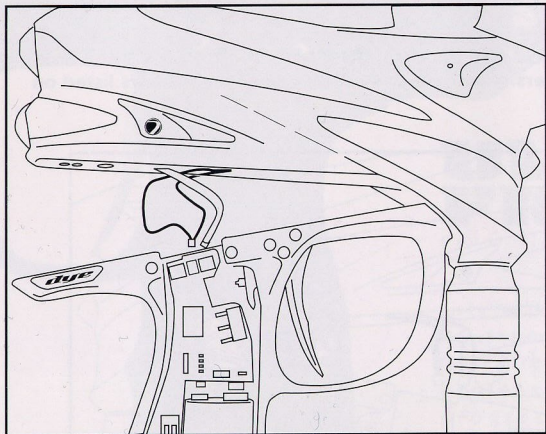
Start by removing the stock frame from your marker. There are two frame screws that need to be removed. Carefully slide the frame off of the marker, taking care not to break the solenoid and eye wires.



Step 2 -

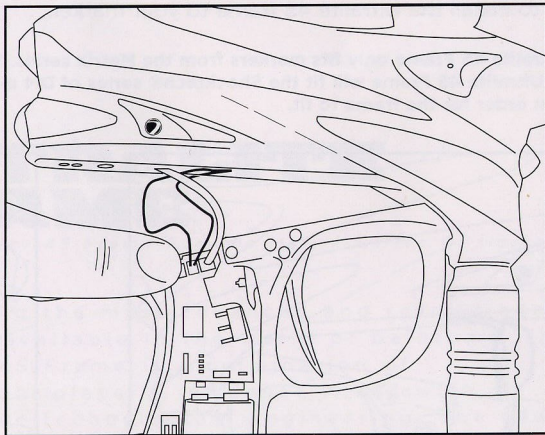
Next, you'll need to separate the solenoid wires and the eye wires from the board on the stock frame. Gently pull the connectors from sockets on the board. Be careful not to pull on the wires as they may break.

ULTRALITE FRAME - INSTALLATION INSTRUCTIONS



Step 3 -

Line up your new Ultralite 45 frame with the bottom of your marker body. The Ultralite 45 frame features a new board, notice the different locations of the solenoid and eye connectors. You may have an excess length of wire, neatly wrap the wires and tuck them to one side of the board. Take care not to pinch the wires between the body and the frame or behind the trigger spring.



Step 4 -

Lastly, you'll need to connect the solenoid wires and eye wires to their corresponding sockets. Make sure you plug the wires into the correct sockets and make sure the connectors are facing the proper direction.

BOARD - SETTINGS AND FUNCTIONS

Turning the Ultralite 45 Frame ON and OFF

To turn on the Ultralite 45 Frame, press and hold the power button until the LED lights turn blue. The blue light indicates board bootup. After the bootup sequence, the LED's will turn either RED (no ball) or GREEN (ball ready to fire). To turn the Ultralite 45 Frame off, press and hold the power button until the LED's turns off.

NOTE: The Ultralite 45 Frame automatically switches off after 10 minutes of non-use.

Firing the Ultralite 45 Frame

As soon as the marker is turned on and the LED's turn from blue to either red or green, your marker is ready to fire. If there is no ball and the LED's are RED, you need to hold the trigger for 1 second to force your marker to fire once. If there is a paintball inside the breech and the LED is green, just press the trigger to fire the marker.

LED LIGHT INDICATOR

The Ultralite 45 Frame uses two super bright LED lights mounted on the circuit board inside the grip frame. These two lights are used to provide information to the user about the marker. They will always show the same information and it does not matter which LED you look at. One is mounted behind the DM logo on the left side of the grip panels. The other one can be seen by looking at the top left side of the grip frame while holding the Ultralite 45 Frame in the position you would while playing a game.

When you turn on the marker in normal operation mode with the power button, the light colors mean the following:

- | | | |
|----------------|---|--|
| Blue | - | Boot Sequence |
| Red | - | Breech is clear, no ball (eye on) |
| Green | - | Ball in breech, ready to fire (eye on) |
| Blinking Red | - | Eye is off |
| Blinking Green | - | Eye failure |
| Blinking Blue | - | Indicates a low battery, battery should be changed as soon as possible |

BOARD - SETTINGS AND FUNCTIONS

BOARD SETTINGS AND CONFIGURATION MODE

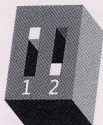
There are five settings you can alter on the Ultralite 45 Frame board with the DIP switches inside the grip frame:

ABS	Anti Bolt Stick.
Trigger Sensitivity	This setting adjusts the delay between two trigger pulls.
Dwell	This is the time the solenoid is activated for.
ROF	Rate Of Fire when the eye is deactivated.
Firing Mode	This is the firing mode the Ultralite 45 Frame uses

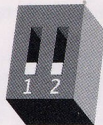
There are two DIP switches mounted on the board of the Ultralite 45 Frame. The first one is used for the ABS setting and the second one is used to access a configuration mode used to change the other four settings.

Anti Bolt Stick -

When ABS is activated, the dwell is increased after 15 seconds of non-use for the next shot fired. This helps to prevent bolt-stick, but may result in higher velocity for the first shot.



ABS On
(default)



ABS Off

BOARD - SETTINGS AND FUNCTIONS

Configuration Mode -



The following settings can only be modified in configuration mode. To activate the configuration mode, turn your marker off and set DIP switch 2 to the ON position. Next, turn your marker on. The LED's cycle through all colors for one second to indicate that you have entered the configuration mode. To cycle through different settings, pull and release the trigger. Configuration mode has 4 settings that can be changed.

Green - Trigger Sensitivity

Values 1 - 20 (factory default 5)

Trigger sensitivity is the amount of time that the trigger has to be released before the next trigger pull is allowed. In some situations with too low of a value, the Ultralite 45 Frame can register more trigger pulls than what was actually pulled. This can cause your marker to shoot full auto, even in semi-automatic mode. To fix this, set trigger sensitivity setting higher.

Red - Dwell

Values 1 - 30 (factory default 18)

Dwell is the amount of time that the solenoid will be activated. Follow these steps for the best way to set your dwell:

- Remove loader and any paintballs from your marker.
- With the dwell set at 10, start increasing the value until the marker begins to fire.
- When you reach the setting where the marker begins to fire, get some paint and a loader and go to a chronograph.
- Increase the dwell until you see no increase in the velocity. This is the optimal dwell setting to be used.

Blue - Rate Of Fire (ROF)

Values 1 - 20 (factory default 20bps)

[When Anti Chop Eye (ACE) is deactivated]

The ROF setting is used to set the maximum rate of fire of your marker. The values do not correspond directly to a certain Balls Per Second (BPS) value. You will need to use the table on the following page to locate your desired maximum ROF setting.

The factory setting is 20 (30bps).

BOARD - SETTINGS AND FUNCTIONS

Value = BPS

1.....10	1115.6
211	1215.9
312	1316
413	1418
514	1520
614.5	1622
714.7	1724
814.9	1826
915.2	1928
10.....15.4	2030

Yellow - Firing Mode

Values 1 - 3 (default 1)

This setting changes the firing mode of the Ultralite 45 Frame. Default is semiautomatic. In the semiautomatic mode, one trigger pull shoots out one paintball. The PSP/NPPL mode and The Millennium mode follow the rules of the paintball tournaments series.

Value 1 - Semi automatic
Value 2 - PSP/NPPL mode
Value 3 - Millennium Mode

NOTE: You cannot turn your marker off with the power button when the marker is in configuration mode. You must first set DIP switch 2 to the off position.

TO CHANGE THE VALUE OF A SETTING:

- 1 While in configuration mode, pull the trigger and hold it for more than one second. The LED will flash to indicate the previous setting. After that, you can set the new value with the trigger. For example, if you want to change the trigger sensitivity to 7 units:
- 2 Cycle through menus by pulling and releasing the trigger until the LED lights GREEN (trigger sensitivity).
- 3 Pull and hold the trigger until the LED starts to flash (factory default for trigger sensitivity setting is 5 units, so the LED will flash 5 times).
- 4 When the LED stops flashing, pull and release the trigger seven times in a fast pace. The new value is set after you haven't touched the trigger for one second. The LED will cycle through all colors to indicate that the new value is saved. All other configurations are changed the same way. Just as in part 2 above, change the mode to RED for "dwell" or BLUE for "ROF" to change the desired configurations.
- 5 To exit configuration mode, set DIP 2 to the off position.

BOARD - SETTINGS AND FUNCTIONS

Battery

Standard 9V batteries will last for about 40,000 shots. Please be aware that there are substantial differences in performance between different brands of batteries. Use of high quality alkaline or lithium ion batteries is recommended for maximum battery life. If you plan not to use your marker for a long period of time (a month), it is recommended that you remove the battery from the marker. An intermittent blinking blue light indicates a low battery. A low battery can cause malfunctions to the marker. In this case, the battery should be changed as soon as possible. When the battery voltage starts to go too low, you will notice your velocity starts to decrease and the board can turn off. For tournament use, it is recommended to change the battery for each tournament. When changing your battery, take special care to ensure the wiring harness is not pinched under the battery.

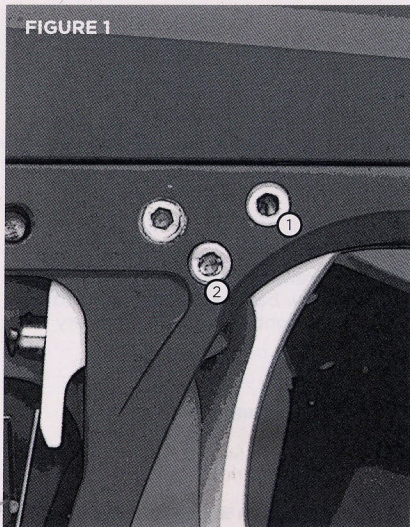
Changing the battery

The battery is housed on the right side of the grip frame. To access the battery, remove the three screws holding the right side grip panel down. Use a 3/32" Allen wrench. Carefully lift the battery out of the frame. When inserting a new battery notice the + and - marks on the board. The positive lead of the 9V battery goes to the left and the negative lead to the right. Inserting the battery backwards does not damage the board but it will not function.

NOTE: If the marker will not function with the eye on, there is a good chance the battery needs to be changed.

TRIGGER - ADJUSTMENTS

FIGURE 1



ADJUSTING YOUR TRIGGER

The trigger's forward travel, over travel and spring tension are fully adjustable so that the user can fine-tune the trigger to his or her exact liking. You do not need to remove the frame from the gun in order to adjust the trigger pull.

- There are two adjustment screws located on the right side of the Ultralite frame (see figure 1) and one adjustment screw behind the trigger. The two screws on the side of the frame adjust the travel of the trigger. The one located behind the trigger is used to change the tension of the trigger spring.

TO ADJUST TRIGGER TRAVEL

- Use a 5/64" Allen wrench to make the desired adjustments.
- The screw toward the front of the trigger (#1 in figure 1) controls the forward travel. Screwing it in will shorten the trigger's length of pull.

Note: If this screw is adjusted too far, the switch will be held down at all times and the marker will not fire.

- The screw toward the rear of the trigger (#2 in figure 1) controls the over travel. By turning this screw you can adjust how far the trigger will travel after it reaches the firing point.

Note: If this screw is adjusted too far, the trigger will not be allowed to travel far enough to depress the switch and fire the marker.

TO ADJUST SPRING TENSION

- Use a 5/64" Allen wrench to make the desired adjustment. The adjustment is made by pushing the allen key through a hole in the trigger.
- To make the trigger pull stiffer, turn the allen key clockwise or in.
- To make the trigger pull lighter, turn the allen key counterclockwise or out.

LOCKING DOVETAIL - ADJUSTMENTS

INTEGRATED LOCKING DOVETAIL FEATURE

The UltraLite frame comes equipped with an integrated locking dovetail. There is a locking screw located on the bottom right side of the UltraLite frame. It can be accessed with a 1/8" allen key through a hole in the grips panels. To unlock a part attached to the dovetail of the frame, turn the locking screw counter clockwise one full turn and slide part off the rail. To attach a part to the rail, slide the part on and turn the locking screw clockwise until part is firmly locked in place.

REMOVING ULTRALITE FRAME FROM YOUR MARKER

If there is ever need to remove the Ultralite frame from your marker make sure to follow these steps.

- Remove three grip panel screws with a 3/32" allen wrench from the right side of UltraLite frame
- Disconnect the solenoid wire and the eye wire from their sockets by gently pulling them out
- Using a 3/32" allen key, turn the front frame screw counterclockwise one full turn
- Finally, turn out the back frame screw and slide the frame back and down until it comes off your marker

To connect the frame follow above steps in reverse order.

NOTE: BE SURE THAT THE FRAME AND TRIGGER ASSEMBLY ARE KEPT CLEAN. IF THERE IS EXCESS DIRT OR PAINT BUILD UP AROUND THE TRIGGER, THE TRIGGER WILL NO LONGER MOVE FREELY. IN ADDITION, PAINT AND DIRT CAN CAUSE THE MICROSWITCH TO NOT FUNCTION PROPERLY OR FAIL. BE SURE YOU DO NOT PINCH THE WIRES BETWEEN THE FRAME AND THE BODY WHEN REATTACHING THE FRAME AND BODY.

Warranty

DYE Precision, Inc. warrants for one year to the initial retail purchaser, from the initial date of purchase, that the paintball marker and regulator are free from defects in materials and workmanship, subject to the requirements, disclaimers and limitations of this warranty. Disposable parts, normal maintenance and standard wear and tear parts such as batteries, o-rings and seals are not warranted. The solenoid and electronic components on the marker are warranted for six months. This warranty does not cover scratches, nicks, improper disassembly, improper re-assembly, misuse, neglect or improper storage. Modification to the product will void the warranty. The only authorized lubricant for the marker is Slick Lube™. Use of any other lubricant will void your warranty. This warranty is limited to repair or replacement of defective parts with the customer to pay shipping costs. Warranty card and proof of purchase must be submitted to Dye Precision for warranty to be in effect. This warranty is not transferable. This warranty does not cover performance. Paintball markers are non-refundable.

Our Technical Support Department is open Monday through Friday, from 9am to 5pm, PST, and can be reached at 858-536-5183. Additional support is available through our web site, www.dyepaintball.com. The specifications & photographs in this material are for information and general guidance purposes only.

Our products are continually updated and changes may be made to specification, design or appearance from time to time. These are subject to change without notice. Contents of box may therefore vary from owner's manual. For details of changes in design, specification or appearance consult your local distributor or dealer.

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