READ FIRST

FOLLOW DIRECTIONS TO AVOID DAMAGING YOUR NEW V3 PREDATOR BOARD DURING THE INSTALLATION PROCESS.

1. IF YOUR ANGEL USES A STOCK RECHARGEABLE BATTERY **DO NOT** INSERT THE 3 PIN POWER CONNECTOR COMING FROM THE BATTERY INTO THE BOARD. THIS WILL DAMAGE THE BOARD AND **VOID YOUR WARRANTY**. THE PREDATOR BOARD IS DESIGNED TO BE USED WITH A 9 VOLT BATTERY ONLY. WE SUGGEST YOU REMOVE THE STOCK BATTERY FROM THE GUN. PLEASE REFER TO YOUR MANUAL FOR DISASSEMBLY INSTRUCTIONS.

2. IF YOU INSTALL THE PREDATOR V3 BOARD INTO A GUN THAT DOES NOT HAVE EYES INSTALLED YOU WILL NEED TO DISABLE THE EYES EACH TIME YOU TURN THE BOARD ON. THIS IS DONE BY PUSHING THE BOTTOM BUTTON ON THE BOARD UNTIL THE EYES ARE DISABLED. THIS USUALLY TAKE ABOUT 2 OR 3 SECONDS. YOUR MROF IS NOW CONTROLLED BY REGISTER 11 WHICH IS THE "EYE OFF" RATE OF FIRE.

   *YOU WILL NEED TO DISABLE THE EYES EACH TIME YOU TURN YOUR GUN ON OR IT WILL ONLY FIRE AT 10BPS

3. THE 3 PIN CONNECTOR AT THE TOP HALF OF YOUR BOARD (P2A) IS FOR A DM STYLE EYE HARNESS AND **NOT** THE STOCK BATTERY PLUG. PLUGGING YOUR STOCK BATTERY HARNESS INTO THIS 3 PIN PLUG **WILL DAMAGE** THE BOARD AND **VOID YOUR WARRANTY**. **DO NOT** PLUG YOUR STOCK BATTERY CONNECTOR INTO PLUG P2A !

4. WHEN INSTALLING YOUR BOARD INTO ANY ANGEL YOU WILL ONLY NEED TO PLUG YOUR SOLENOID IN THE PROPER 2 PIN PLUG ON THE BOARD. THIS PLUG (P1) IS LOCATED ON THE RIGHT SIDE OF THE BOARD JUST ABOVE THE 05 SPEED ON/OFF PLUG (P3). **DO NOT** PLUG THE 3 PIN BATTERY CONNECTOR INTO THE DM STYLE EYE HARNESS PLUG (P2A). THIS **WILL DAMAGE** THE BOARD AND **VOID YOUR WARRANTY**.

5. WHEN INSTALLING THE V3 PREDATOR INTO AN 05 SPEED STYLE ANGEL A PARTICULAR SETUP MUST BE PERFORMED. THIS WILL ENABLE THE POWER SWITCH ON THE REAR OF THE GUN.
   A. DIP SWITCH NUMBER 4 MUST BE TURNED ON
   B. THE ON/OFF CONNECTOR THAT IS COMING FROM THE REAR SWITCH OF THE GUN MUST BE PLUGGED INTO THE CORRECT PLUG ON THE BOARD (P3). THIS PLUG IS LOCATED ON THE RIGHT SIDE OF THE BOARD JUST BELOW THE SOLENOID PLUG (P1).

6. DIPS 5 AND 6 MUST **ALWAYS BE ON** OR YOUR BOARD WILL NOT WORK. "ON" IS IN THE UP POSITION.

BOARD PLUG LEGEND:
P1 = SOLENOID
P2A = DM STYLE EYE HARNESS (DO NOT PLUG YOUR STOCK BATTERY INTO THIS PLUG)
P2B = STOCK WDP EYE HARNESS
P3 = 05 SPEED ON/OFF CABLE. MUST USE THE INCLUDED JUMPER IF THE BOARD IS NOT IN AN O5 SPEED.
P4 = FACTORY PROGRAMMING PLUG.

Predator V3 Angel Board

You might not realize this but you have just purchased one of the most devastating control boards to be developed for the sport of paintball. We took a proven circuit design that is being used by some of the finest professional paintball players in the world and placed it in a package that will fit into any Angel other than the original LED. We have given you total programming control so please read the directions carefully so you will understand everything your new Predator is capable of doing. Our code has been optimized for the extremely fast rate of fire that all angels can achieve so set your rate of fire high and hold on. We revolutionized the service industry and now have attacked the electronics market with our new products.

NOTE: The DWELL might need to be adjusted before you use your V3 board for the first time.
LCD, IR3 = 14ms dwell time All other Angels should start at 10ms and then tune from there.

LED:
Teal = Ball in breech Blue = No ball in breech Red Flashing = Eye off Green = Program mode
Dip Switches:
1. Anti Bolt Stick (on = ABS activated. This can be set in the registers)
2. Tournament lock (on = will not allow board to go into programming mode)
3. Factory reset
4. 05/06 Speed code activation (this must be turned on ONLY when installing in the 05 speed)
5. ALWAYS ON
6. ALWAYS ON
Activation:
Push the top button on your frame and hold until the LED activates.
Eye Operation:
Push and hold the bottom button to activate or deactivate the eyes. Your new Predator V3 is capable of using the stock eye ribbon cable on the A4 Fly, 05 Speed, and the G7) We have also included a standard 3 pin connector that we use on our custom installs. This is the eye harness that is used on the DM series of paintball guns. We offer our version of these with a ultra bright RED or BLUE eye component that is visible in the breech.

Example for programming your Predator:

1. Your tournament LOCK must be off (this is DIP 2 on your V3 board). We strongly suggest you turn your tournament lock on while playing.
2. Pull and hold the trigger then turn the gun on by using the button on the back of the gun
3. Release trigger (LED turns GREEN)
4. You are now in the REGISTER select area
5. Pull trigger the appropriate number of times to go to register. Example: 2 pulls will take you to the MROF register (register 2)
6. LED will flash the current setting of the register you selected
7. You are now in MODE select area
8. You can now pull the trigger to insert the new setting.
9. The LED will flash 2 times to indicate it has taken the new setting
10. You are now back in the REGISTER select area
11. You can now move to a new register by simple pulling the trigger the appropriate number of times or turn the gun off and back on to use the new settings

NOTE: If you select Register 1, you are expected to enter a fire mode, again in trigger clicks. After you have made a selection, the light will flash and *remain on*. The gun is now prepared to fire. We suggest you make the fire mode the last register you select as the board will reboot after it has been selected.
Programming advanced firing mode example on Predator board:
Player wishes his or her marker to ramp once they reach 6 bps but NOT start ramping until they have fired 10 shots.

1. Go into programming mode by turning your board on while holding the trigger back
2. LED will flash once to indicate you are in program mode
3. Release the trigger
4. Pull trigger 5 times to enter the RAMPING ROF register (register 5)
5. LED will flash the current setting
6. Pull the trigger 6 times to set this register to 6bps
7. LED will flash 2 times to indicate it took the new setting
8. Pull trigger 6 times to enter the RAMPING SHOT COUNT register (register 6)
9. LED will flash the current setting
10. Pull the trigger 10 times to indicate you wish the ramping to start after you have fired 10 shots
11. LED will flash 2 times to indicate it took the new setting.
12. Pull trigger 1 time to enter the FIRING MODE register
13. LED will flash the current setting
14. Pull trigger 6 times to enter FAST RAMPING mode
15. LED will flash 2 times to indicate that it took the new setting AND the gun will reboot and be ready to fire. The gun reboots automatically after you set register 1. This does not happen after any of the other registers.

5.0 Registers

Register	Default	Description

1		**Firing Mode:**
		    1. **Semi**
		    2. **Auto Response**
		    3. **Full Auto**
		    4. **Smooth Ramp** (debounce slowly drops)
		    5. **Assisted Ramp** (turbo style ramping where it adds shots based on the rate of fire. Slower trigger pulls add less shots. Faster trigger pulls will add more shots.
		    6. **Fast Ramping** (Shots are added as soon as you reach the settings in register 5 and 6)
		    7. **Triplet Shot Ramping** (fires 3 shots every time the trigger is pulled. This speeds up the faster you pull the trigger)
		    8. **PSP1** (3 shots semi then fast ramping) (no need to set register 6 as this feature is built in. However, you can set the AFA ROF in register 5)
		    9. **PSP2** (3 shots semi then super-fast ramping) (no need to set register 6 as this feature is built in. However, you can set the AFA ROF in register 5)
		    10. **PSP3** w/Triple Shot ramping (3 shots semi then fires 3 shots every trigger pull) (no need to set register 6 as this feature is built in. However, you can set the AFA ROF in register 5)
		    11. **NXL** (3 shots then full auto)
		    12. **Breakout** (Full Auto then fast ramping. Settings in registers 5/6 are honored)
		    13. **OMFG** (cant really explain it but it is amazing) WARNING: Don't stand behind your own players when using this one.
		    14. **NXL Breakout** First shot is full auto then 3 shots semi then full auto again. We have no idea why we do this stuff

2		**Rate of Fire:** This is the GLOBAL rate of fire. This controls the MROF in all modes with the eye on. IF register 11 is set to 1 this will also be your EYE off MROF. Otherwise your eye off MROF is controlled by the number you enter in register 11
3		**Electronic and Mechanical Anti Bounce:** A higher setting will keep the gun from firing extra shots with each trigger pull. The board monitors the noise and firing rate then adjust the mechanical debounce to work best with the electronic bounce settings.
4		**Dwell:** Bolt Forward Duration. Length of time the bolt stays forward
5		**AFA ROF:** 1 = off, 2 and above is the rate of fire that must be reached and maintained before the advanced firing modes activate.
6		**AFA Shot Count:** Actual number of trigger pulls before ramping activates
7		**Fire Hold Off:** Delay before the gun will fire again after cycling, in ms
8		**Eye Hold Off:** Delay before the gun will fire after seeing a ball, in ms. If you are using a slow hopper it might be necessary to increase this to avoid chopping.
9		**Anti Bolt Stick:** This is the time the board waits before increasing the dwell to compensate for a gun that has an issue with bolt stick. NOTE: Using this feature on a gun without this issue will result in the first shot being hotter. 1 = off 2 = 5s 3 = 10s 4 = 15s
10		**Anti Bolt Stick Time:** This is the increase in dwell when register 9 is engaged.
11		**Eye Off Rate Of Fire:** 1 = rate set in register 2, 2 and above equals the maximum rate of fire when the eyes are turned off. Example: If this register is set to 1 then the rate of fire you select in register 2 will be the same with the eyes on or off. If this is set to 11 then your eye off rate of fire will be a maximum of 11 bps.
12		**ROF Additions in .20 of a second:** 1 = off, 2 = .20, 3 = .40, 4 = .60, 5 = .80
13		**Disable Eye thru trigger:** 1 = yes, 2 = no (this feature allows you to turn the eyes off by holding the trigger back for 2 seconds)
14		**Clearing Shot: 1 = yes, 2 = no (This allows you to fire a ball if you hold the trigger back for ¾ of a second in the event the eyes do not see a ball)**
15		**DM4/WMD board: Not used** **Shocker Board:** **Eye Type:** 1 = Break Beam, 2-20 = Reflective with sensitivity control) 2 = most sensitive 20 being the least. YES we can see black paint with our new reflective eye logic. Currently our shocker board is the only one that uses a reflective eye system. **NME/Intercepter Board:** **Eye sensitivity**: 1 - 20 (20 being more sensitive). If your eyes are not "seeing" each other increase this setting.

Your new angel board has the ability to be used in any angel from the LCD to the newest release that is available.

We designed a system of break-away TABS to aid in the install. These TABS can be removed with a set of pliers or side cutters that are available at any hardware store. There is a good chance that you already have these tools since they are a commonly used item.

We have already installed 2 operating systems on your new Predator to take advantage of how the 05 speed uses a standard battery on/off and no back buttons. No extra wiring is needed. A simple flip of a switch tells your new Predator that it has been installed into an 05 Speed.

For any Angel after the A4 fly (05 speed, G7 etc) you will need to remove or flatten the leaf spring that is attached to the back of your trigger. During our initial testing we found that most players preferred the trigger to have direct contact with the micro switch instead of having the spring come in contact with the micro switch. This setup gives the player a more natural feel. If you prefer to leave the leaf spring on the trigger you can push it as flat as you can get it against the back of the trigger. To remove this spring a set of vicegrips and some determination is all that is needed.
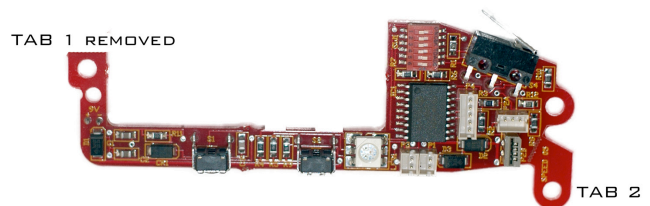
IR3 - SPEED - A4 - A4 FLY - G7 INSTALL

TAB 1 REMOVED

JUMPER INSTALLED   TAB 2 REMOVED

IR3 - G7 Install (not the 05 speed)
1. Dip switch 4 must be off
2. Tab 1 is removed
3. Tab 2 is removed
4. Jumper in place

LCD INSTALL

TAB 1 REMOVED
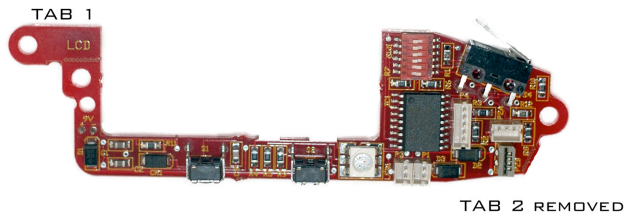
TAB 2

LCD Install
1. Dip switch 4 must be off
2. Tab 1 is removed
3. Jumper in place

05 SPEED INSTALL

TAB 1

TAB 2 REMOVED

05 SPEED
1. Dip switch 4 must be ON
2. Tab 2 is removed
3. No jumper (on/off harness will plug into this port)

SPEED 05 MOUNTING HOLE

PROGRAMMING DIP SWITCHES

25 GRAM MICRO SWITCH

IR3/ SPEED A4 / A4 FLY G7 / 05 SPEED 06 SPEED MOUNTING HOLE

STANDARD ANGEL MOUNTING HOLE

PROGRAMMING PORT

PRO PLUS EYE RIBBON

WDP EYE RIBBON

EYE BUTTON

ON/OFF   05 SPEED POWER HARNESS   SOLENOID

LCD MOUNTING HOLE