Features:

2 Modes of Fire
--Semi Auto and Ramping Mode!

Optical Trigger Sensor + Trigger
---Using a miniature break beam sensor instead of a micro-switch, users can hit much higher rates of fire on our LCD Matrix Ramping board. Included is an ultra lightweight Optical Trigger.

ABS Software
---Anti-Bolt Stick programming helps to eliminate First Shot Drop Off.

Compatibility
---LCD Matrix Frames, Gen-E/DYE and TMC Eyes.

AdvantagePB LLC™

LCD Matrix Ramping Board User's Manual

For More Information Please See:
www.AdvantagePB.com
AdvantagePB LLC
103 Fulton Blvd.
Commack, NY 11725

Specifications subject to change without notice..

Installing Your LCD Matrix Ramping Board:
To install the LCD Matrix Ramping board you will need a pair of small electronics pliers (needle nose), 3-32 Allen key, and a 5/64 Allen key.

First remove the grips and grip frame from your Matrix. Next carefully remove the connectors from your old circuit board.

Next, remove the screws holding the old circuit board. Gently remove the existing circuit board.

Then remove the rear travel adjustment screw from your Matrix trigger.

Now you are ready to install the LCD Matrix Ramping board. Slide the LCD Matrix Ramping Board into your grip frame buttons holes first. The board will fall into place but, be careful not to push the board down.

Now attach the connectors and push the wires into the frame. This will keep the wires away from your trigger and remove any stress from the connectors on the LCD Matrix Ramping Board.

Recommended: Install Optical Trigger provide with your new board. The screw should go all the way through the optical sensor and be flush with the bottom of the sensor. This screw is now your fire point adjustment.

Press the top button (PB1 SEL) to turn the LCD Matrix Ramping board on. To test the trigger you should pull the trigger and see the LED display illuminate. Your LCD Matrix Ramping Board is now ready to be used.

Note: The optical sensor may sometimes be triggered by sunlight through clear grips. We recommend using only the black opaque grips that come with your Matrix. Clear grips may not stop the ambient light around the frame and can sometimes cause optical trigger malfunctions.

Power Operation: To turn the LCD Matrix Ramping Board on press the top button. To turn the LCD Matrix Ramping Board off, press the bottom button for 3 seconds. When powering off the display will read "BYE".

Eye Operation: The LCD Matrix Ramping Board has two modes of firing. AST (Semi Auto) is the fully legal tournament mode that allows you to play in all tournaments with no ramp settings. The other mode is called FF (Ramp Mode). FF mode allows you to fire with ramping settings enabled. Both modes are usable with the optical breech sensor (eye) enabled. To enable the eye in either mode you must push the middle button. When you depress the button the display will say "ON" if the eye is turning on, or "OFF" if the eye is turning off. When the eye is enabled and becomes permanently blocked with paint (if you chop a ball in the eye mechanism) then the board reverts to eye off mode after you fire the gun three times.

Programming the board:

There are two separate menu functions that can be changed on the LCD Matrix Ramping Board. The first menu is accessed through the top button (PB1 SEL). The second is accessed through the white button on the bottom of the board (PB4 LOCK).

The top button (PB1) menu includes the following options.

GAME TIMER: Set this to the desired value and your gun will start counting down as soon as you pull the trigger. When the time is 10 seconds to expiring the frame will vibrate constantly.

SHOT: This is the counter that tells you how many shots have been registered to the board.

SCROLL SPEED: This is the speed at which the scrolling display shows you the menu option.

INTENSITY: This is the intensity of the LED display. A higher number is a brighter display. Note that the display will use most of the battery power. A dimmer display will save battery life.

VERSION: The next option shows you the version of the software in the LCD Matrix Ramping Board. The most current version is V406.

BATTERY METER: The battery meter will show you in percentage points how much battery life you have remaining. A standard battery will drain to 80% quickly then stay between 80% and 60% for a long time.

The bottom button (PB4 LOCK) menu includes all the options of the PB 1 menu plus:

MODE: Here you can change your board from AST (Semi Auto) mode to FF (Ramp) mode. The number after AST or FF is whether or not your eyes are enabled. Example AST0 = tournament mode without eyes enabled, AST1= tournament mode with eyes enabled, FF0 = ramping enabled without eyes, FF1 = ramping enabled with eyes.

FORWARD PULSE: One of the benefits to the LCD Matrix Ramping Board is the pulse timing. The pulse provided to the solenoid is completely even with no breakdown or time to deliver. This means that your pulse settings can be lower than your stock settings and can still give you the same results. The stock setting for the LCD Matrix Ramping Board is 13.

REVERSE PULSE: This controls the back pulse. The pulse provided to the solenoid is completely even with no breakdown or time to deliver. This means that your pulse settings can be lower than your stock settings and still give you the same results. The stock reverse pulse setting for the LCD Matrix Ramping Board is 30.

The lower the reverse pulse, the faster the gun will fire. To figure out the firing rate just add the forward and reverse pulse together. Take that number (forward plus reverse) and divide it into 1000.

Please note the eyes must be off to access this setting.

ABS TIME: This sets your ABS delay. The number displayed is the amount of time the gun will wait to add forward pulse to one shot. It is displayed in seconds.

ABS+ TIME: This sets your ABS add time. ABS will wait for the delay to be reached before it will add the time selected in this menu. It is recommended that ABS+ time be adjusted to 20 milliseconds if high debounce settings are being used.