MTW

SPARTAN ELECTRONICS
OWNER'S MANUAL
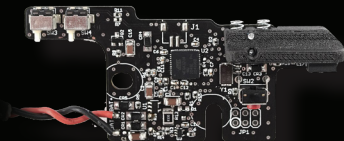
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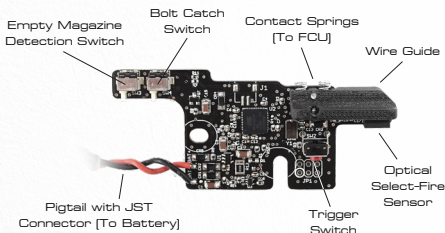
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Don't Forget to
Register Your Warranty!

Your Spartan Electronics board is backed by Wolverine Airsoft's limited warranty. Scan the QR code or visit www.wolverineair-soft.com/warranty to read our full warranty and register your product.

Getting Started

The MTW Spartan Electronics board combines a trigger board and FCU into one powerful board. Before you begin, please see the diagram below and familiarize yourself with each component.

Empty Magazine Detection Switch

Bolt Catch Switch

Contact Springs [To FCU]

Wire Guide

Pigtail with JST Connector [To Battery]

Trigger Switch

Optical Select-Fire Sensor

*Note: MTW Spartan Electronics boards manufactured before Oct 1, 2021 are green in color, use a mechanical select-fire sensor and feature a hole instead of a slot to receive the rear trigger pin.

Installation / MTW

Installing the Spartan Electronics board into the **MTW** is pretty straight forward. After separating the upper and lower receivers, remove the front trigger pin.

With the front trigger pin removed, the board will fit into the lower receiver as shown. Make sure the hole and slot in the board align with the trigger pin holes in the receiver. ***Note: When installing the green version, it is necessary to remove the rear trigger pin and selector barrel before installation.**
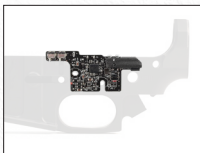
Prepare the trigger for use with the optical select-fire sensor. For a black barrel, place a white sticker at the forward position. For a reflective barrel, place a black sticker at the forward position. White or black paint can also be used.

After replacing the trigger pins and/or selector barrel, connect the battery, insert it into the buffer tube or grip while running the wire alongside the wire guide. Note that the battery will always draw current when connected, so the MTW should not be stored with the battery connected.
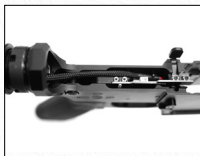
Semi / Auto / Burst Switching

The Spartan Electronics board can be cycled through five different fire modes as listed below. To advance to the next fire mode, set your gun to semi mode and hold the trigger. After 5 seconds, the board will advance to the next setting.

Fire modes

Standard Programming [MTW, MTW-9]

- Semi / Full Auto [Default in US]
- Semi / 3-Round Burst
- Semi / 2-Round Burst
- Semi / Semi [Default in UK]
- 2-Round Burst / Full Auto

DMR Programming [MTW-308]

- Semi / Full Auto
- Semi / 3-Round Burst
- Semi / 2-Round Burst
- Semi / Semi [Default]
- Semi + 2-Sec Delay / Semi + 2-Sec Delay

  [2-sec delay only availavble on MTW-308 boards manufactured after Aug 2024.

Heretic Programming [Article Series]

- Semi / Full Auto
- Semi / 3-Round Burst
- Semi / 2-Round Burst
- Semi / Semi
- Semi / Binary [Default]

* Boards sold in Germany are locked in Semi / Semi mode.

Rate of Fire Programming

1. Enter programming mode by unplugging the battery, holding down the trigger and then plugging in the battery. The gun will now fire every time the trigger is **released**, indicating you are in programming mode.

2. Set the select-fire switch to **full-auto** to enter ROF programming mode.

3. Pressing and holding the trigger will produce a 3-round burst once every second, gradually increasing each time. Once the maximum setting is reached, the board will cycle to the lowest setting and repeat the process. When the desired ROF is reached, release the trigger.

4. Exit programming mode by disconnect the battery.

Available ROF settings

Setting	ROF
1	10
2	12
3	15
4	18
5	21
6	25
7	30
8	35

Tuning / Dwell Programming

Before you start, you will want a loaded magazine, a filled tank with your regulator set to your desired operating pressure. For best results, we recommend using a chronograph.

1. Enter programming mode by unplugging the battery, holding down the trigger and then plugging in the battery. The gun will now fire every time the trigger is **released**, indicating you are in programming mode.

2. Set the select-fire switch to **semi-auto** to enter dwell programming mode.

3. Insert your loaded magazine and plug in the air line.

4. With the gun pointed through the chronograph, press and hold down the trigger. The gun will fire once per second, reducing the dwell with each shot. Watch the chronograph and release the trigger when you see a drop of about 10 fps. If you do not have a chronograph simply watch for the trajectory of the BB to drop indicating a loss of velocity.

5. Double-tap the trigger to increase the dwell to the previous setting.

Note: You may test fire by pressing and releasing the trigger to verify that setting is correct. Double tapping the trigger will increase the dwell further if necessary. If you hold the trigger down long enough to cycle through all the dwell settings the gun will shoot twice indicating that it

has cycled back to the highest dwell setting."

6. Exit programming mode by disconnect the battery.

Available Dwell settings

Setting	Dwell [Microseconds]
1	18
2	14.5
3	11
4	10.5
5	10
6	9.5
7	9
8	8.5
9	8
10	7.5
11	7
12	6.5
13	6
14	5.5
15	5
16	4.5

Empty Mag Detection
Mode Select

The MTW Spartan Electronics board will automatically disable firing after the last BB is fired when using a Wolverine Airsoft MTW Magazine. Firing will resume in one of two ways depending on the following settings:

• Traditional (Default): To reset empty mag detection, the user must press the Bolt Catch after loading a new magazine.

• Simplified: The MTW will automatically reset empty mag detection when the magazine is removed without requiring use of the Bolt Catch. We recommend putting the MTW in simplified mode when using standard AEG magazines that do not have empty mag detection.

To change between Traditional and Simplified mode simply place the selector on semi and hold down the trigger and the bolt catch for 5 seconds.

Need professional help?

To find a retailer close to you visit:
www.wolverineairsoft.com/dealers