

E.C.U. (Electric Control Unit) V2

SWISS ARMS



Technical Specifications:

- Size : 55x18x10 mm
- Operating Voltage : 7.2 Volts \approx 12.0 Volts
- Maximum continuous operating current : 65 Amps
- Operating Temperature : $-10^{\circ} \approx +70^{\circ}$
- Recommended operating battery type : NiMH from 7 to 10 cells (8.4 volts and 12 volts), Li-Po 2 and 3 cells (7.4 Volts and 11.1 Volts)
- BURST programmable from 1 to 12 shots
- FULL AUTO mode : maximum 30 shots
- Battery low detection : Automatic according to the battery type.

WARNING: Because of the Automatic detection of the minimum voltage, you have to take care that you use a good condition and fully charged battery. Furthermore, any new battery must have about 3-5 Charge / Discharge cycles to obtain its full capacity. With some Entry Level batteries, the voltage is too low and the ECU system cannot work properly, even if the battery is fully charged. We recommend our SWISS ARMS batteries made by Intellect to have a safe and reliable ECU functioning. In case of malfunction, please recharge your battery.

BATTERY TYPE SELECTION

1 - To enter in the programming mode :

Insert a fine point into the hole located near the arrow "MODE". Press 4 seconds on the programming button of your E.C.U.:

- > the RED LED is going to ignite during 6 seconds. During this lap of time, you have to make your selection (go to Step 2)). if you don't do anything, the RED LED is going to go out and you will be OUT of the programming mode (no modification will be registered).

2 – Battery Voltage selection :

A – Mode LiPo 11.1v: press briefly (slight pressure) ONCE on the programming button, the RED LED is going to flash ONCE to indicate the selection and will remain lit.

VALIDATION: press 4 seconds on the programming button of your E.C.U.:

- > the RED LED is going to go out by validating your selection and you will be taken out of the programming mode. Then, the programming is done.

IMPORTANT NOTE : you have 10 seconds to validate your choice, if the RED LED goes out, you will be OUT of the programming mode and your E.C.U. will keep the previous selection.

B – Mode LiPo 7.4v: press briefly (slight pressure) a FIRST TIME on the programming button, WAIT for the RED LED to flash ONCE to indicate the selection, then press briefly a SECOND TIME, WAIT for the RED LED to flash TWICE to indicate the selection, the RED LED remains lit.

VALIDATION: press 4 seconds on the programming button of your E.C.U.:

- > the RED LED is going to go out by validating your selection and you will be taken out of the programming mode. Then, the programming is done.

IMPORTANT NOTE : you have 10 seconds to validate your choice, if the RED LED goes out, you will be OUT of the programming mode and your E.C.U. will keep the previous selection.

C – Mode NiMH / NiCD 8.4v: press briefly (slight pressure) a FIRST TIME on the programming button, WAIT for the RED LED to flash ONCE to indicate the selection, then press briefly a SECOND TIME, WAIT for the RED LED to flash TWICE to indicate the selection, then press briefly THIRD TIME, WAIT for the RED LED to flash THREE TIMES to indicate the selection, the RED LED remains lit.

VALIDATION: press 4 seconds on the programming button of your E.C.U.:

- > the RED LED is going to go out by validating your selection and you will be taken out of the programming mode. Then, the programming is done.

IMPORTANT NOTE : you have 10 seconds to validate your choice, if the RED LED goes out, you will be OUT of the programming mode and your E.C.U. will keep the previous selection.

D – Mode NiMH / NiCD 9.6v: press briefly (slight pressure) a FIRST TIME on the programming button, WAIT for the RED LED to flash ONCE to indicate the selection, then press briefly a SECOND TIME, WAIT for the RED LED to flash TWICE to indicate the selection, then press briefly a THIRD TIME, WAIT for the RED LED to flash THREE TIMES to indicate the selection, then press briefly a FOURTH TIME, WAIT for the RED LED to flash FOUR TIMES to indicate the selection, the RED LED remains lit.

VALIDATION: press 4 seconds on the programming button of your E.C.U.:


- > the RED LED is going to go out by validating your selection and you will be taken out of the programming mode. Then, the programming is done.

IMPORTANT NOTE : you have 10 seconds to validate your choice, if the RED LED goes out, you will be OUT of the programming mode and your E.C.U. will keep the previous selection.

If you forget the selected Battery voltage in your E.C.U.: you can press briefly ONCE at any time on the programming button, and the number of flashes of the RED LED will indicate you the selected mode.

Do not forget to select the good mode for your battery voltage, to protect its optimal performances and to avoid damaging it.

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OPERATING	HOW TO SET THE E.C.U. (Electronic Control Unit)	RESULTS
1 - FACTORY BURST MODE (3 shots)	No setup needed for "BURST 3 SHOT" mode because it's preconfigured at the factory. Simply connect your E.C.U. SWISS ARMS between the battery and your A.E.G..	With its fire selector placed in FULL AUTO mode, your AEG will shoot a BURST of 3 bbs.
2 - RETURN in FULL AUTO MODE (limited to 30 shots)	1 - Set the fire selector of your A.E.G. on FULL AUTO. 2 - Press the trigger for 5 seconds until you hear 3 beeps sound, then release the trigger. 3 - Press again the trigger for 5 seconds until you hear 1 validation beep sound, then release the trigger.	With the fire selector of your A.E.G. placed on FULL AUTO and as you hold the trigger pressed, you will get a long burst of 30 rounds. At each interruption of pressure on the trigger, the "30 shots cycle" will be reset. (CAUTION: Do not keep the pressure on the trigger after the end of the continuous burst of 30 shots beyond 4 seconds, which would activate programming mode)
3 - BURST PROGRAMMING MODE (1-12 shots)	1 - Set the fire selector of your A.E.G. on FULL AUTO mode. 2 - Press the trigger for 5 seconds until you hear 3 beeps sound, then release the trigger. 3 - Press and release the trigger as many times as the number of shots you want to get for your BURST (from 1 to 12 shots maximum) 4 - Press again the trigger for 5 seconds until you hear 1 validation beep sound, then release the trigger.	With the fire selector of your A.E.G. placed on FULL AUTO and as you hold the trigger pressed, you will get a BURST of shots equal to the number of pressures made during this program. (CAUTION: Do not keep the pressure on the trigger after the end of the burst beyond 4 seconds, otherwise return to programming mode is set)
4 - RETURN in BURST MODE after the FULL AUTO MODE (limited to 30 shots)	You must configure the number of shots that you want for the BURST, repeat programming step number 3 (BURST programming mode).	

Features:

- Battery protection against undervoltage : If once pressing the trigger you hear a long BEEP, then your battery is too discharged to properly operate your AEG. Your A.E.G. will be "tripped" until a Full charged battery replace the discharged one (which prevent it from dropping below the critical voltage that could damage your battery).
- Simplified and optimized programming : Programming your E.C.U. is fast and convenient with just the trigger of your AEG.
- BURST programmable from 1 to 12 shots.
- FULL AUTO mode : maximum of 30 shots.
- E.C.U. compatible with the latest battery technologies available up to date (Li-Po).
- Using Technology AB (Active Breaking : electric pulse reverse that has a damping effect on the engine and always places the piston in the same position).
- Beeps sound available for programming confirmation and battery-low indication (to protect your batteries).
- Self-adjust battery status to suit various types of batteries.
- Small size (fits easily into most existing A.E.G.).

CAUTION :

- If the rate of your A.E.G. is very high (exemple : higher than or equal to 25 shots / second) maybe you will have a shift of one shot in programming.
Therefore, if you want to set your BURST 3 shots, you need to press 2 times the trigger instead of 3 times, and so on.
- Some A.E.G. have a gearbox with an electrical switch with "double electrical contact" (One contact for the SEMI mode and a second one for FULL AUTO mode), which limits the use of the E.C.U. programming to the "BURST 1-12 shots" mode, the "FULL AUTO 30 rounds" might be unavailable on those models.
Examples: Steyr Aug, P90, F2000. With this type of electrical switch : one touch (instead of three) of the trigger is enough to set a BURST of 3 rounds, and 10 pressures to get a BURST of 12 shots.
- In case of operation incident (mechanical lock of your gearbox or overvoltage detection and self-protection of the E.C.U.), simply unplug the E.C.U. and reconnect the battery directly to your AEG to make a firing cycle, then reconnect your E.C.U. .
- Make sure that you disconnect the battery after using your AEG with your E.C.U.

