



## *Signature Series*

# SPC-2PGM Tool Speed Programmer



## **INSTRUCTION MANUAL**

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[www.aimco-global.com](http://www.aimco-global.com)

Thank you for your purchase of the SPC-2PGM Programmer used in conjunction with Signature Series tools from AIMCO. The Signature Series is line of Cordless Tools that produce Industrial Grade accuracy when used correctly on a wide range of applications. Should you have any questions regarding the Signature Series Programmer detailed in this manual or any other threaded fastening needs, please contact your Authorized AIMCO Representative.

**WARNING! READ ALL INSTRUCTIONS COMPLETELY BEFORE OPERATION.**

Comply with all the instructions and rules in this manual.

Keep these instructions in a safe place.

**SAVE THESE INSTRUCTIONS.**

## **TABLE OF CONTENTS**

General Safety Rules . . . . .	3
Functional Description . . . . .	4
Operation Diagram . . . . .	4
Programmer Setup . . . . .	5
Programmer Operation for Precision Clutch Tools . . . . .	6–15
Programmer Operation for Shut-Off Impact Tools . . . . .	16–26

## **GENERAL SAFETY RULES**

Please read this manual carefully before operation and follow the instructions.

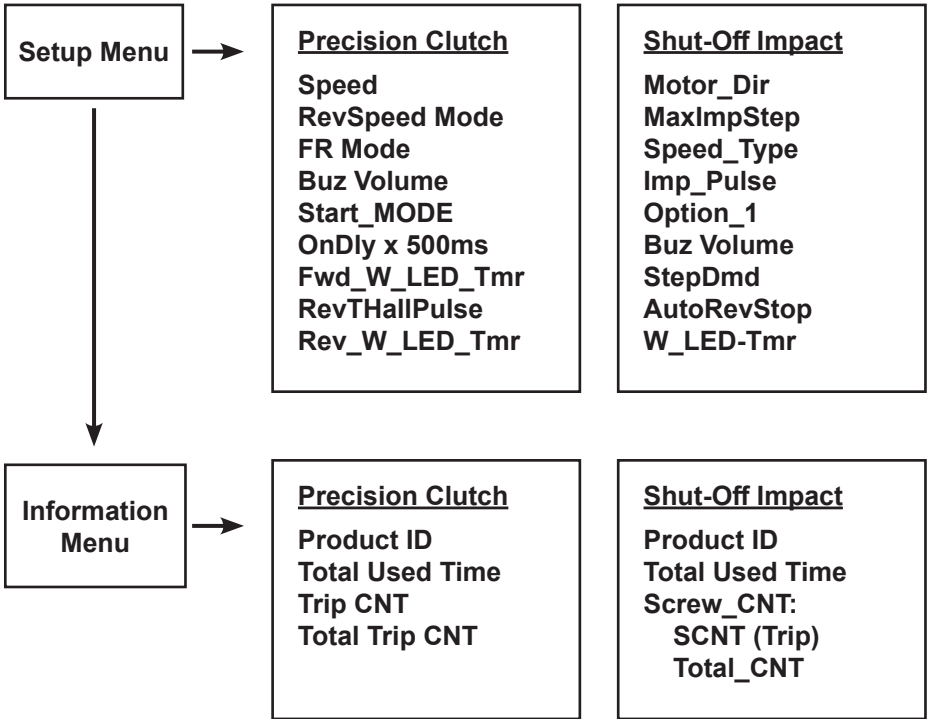
1. Avoid exposing programmer to water or humid environment.
2. Avoid placing programmer on unstable objects.
3. Avoid pressing or impacting programmer LED display.
4. Do not expose to direct sunlight to ensure optimum visibility of LED display.

Note:

After changing settings with the SPC-2PGM Programmer, please unplug the mini USB connector, and then remove and reinstall the battery pack onto the tool.

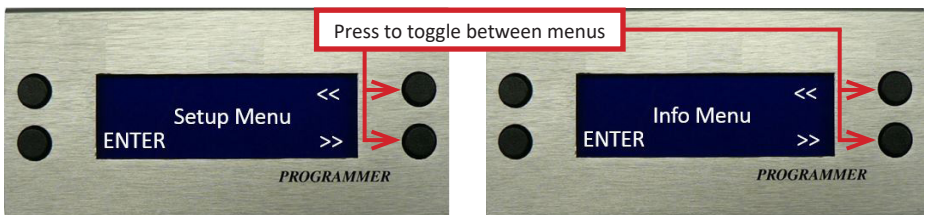
# FUNCTIONAL DESCRIPTION

## Operation Diagram



## Toggle Between Setup Menu and Info Menu

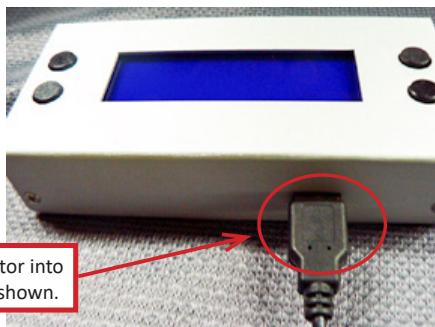
When either Setup Menu or Info Menu is displayed, press “<<” or “>>” to move from one menu to the other.



## PROGRAMMER SETUP

**Note:** Please install a fully charged battery pack onto the tool before using the programmer to make adjustments to the tool. The tool battery is the power source for the programmer.

**Step 1:** Plug USB connector into Programmer using supplied USB to USB Mini cable



Plug USB connector into Programmer as shown.

**Step 2:** Plug mini USB connector into the tool as shown using supplied USB to USB mini cable. Press tool trigger momentarily to switch Programmer on and the Setup Menu displays automatically.



Plug mini USB into the tool as shown. Angle Nutrunners will have connector on the tool body.

## PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

### Tool Speed (RPM)

Note: Tool speed is preset to maximum from the factory.

Only Forward rotation (CW) RPM is adjustable. The Reverse rotation (CCW) RPM is locked in at the maximum RPM capability of the tool.

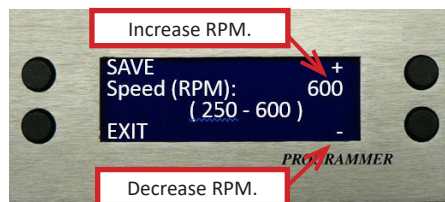
**Step 1:** Press ENTER for mode selection.



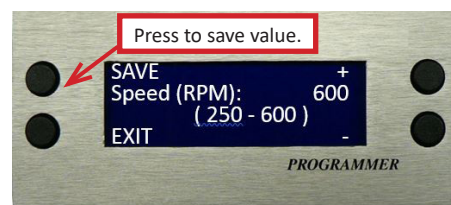
**Step 2:** Press "<<" or ">>" to find Speed<rpm> mode, then press EDIT to start the speed adjustment.



**Step 3:** Press "+" or "-" to increase or decrease RPM of tool CW rotation in 50 RPM increments. The display shows the RPM range of the tool connected to the programmer (250 – 600 is shown as an example).



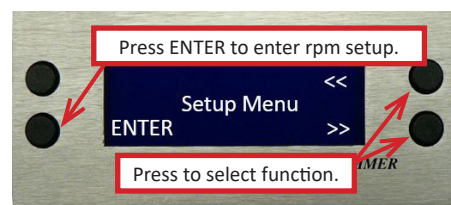
**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer.



**Step 5:** Press EXIT to leave the RPM setting and go to Setup Menu.



**Step 6:** When at Setup Menu, press ">>" or "<<" for more function set-ups or unplug MINI USB from tool to finish the setup.



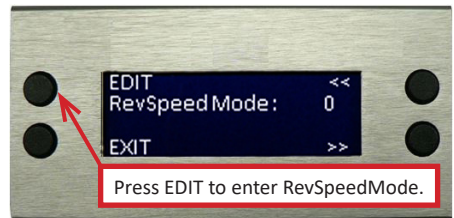
# PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

## RevSpeedMode For reverse (CCW) speed options

**Step 1:** Press ENTER for mode selection.



**Step 2:** Press “<<” or “>>” to find RevSpeedMode, then press EDIT to enable changes.

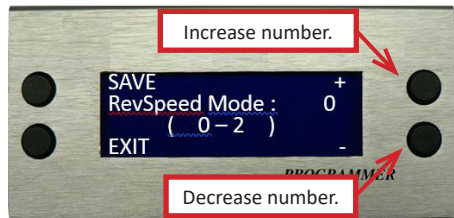


**Step 3:** Press “+” or “-” to choose the CCW speed you prefer:

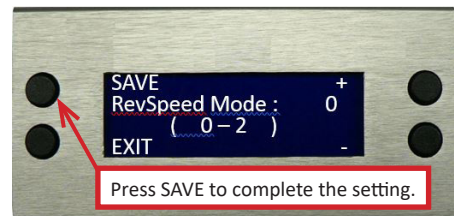
“0” setting: Reverse speed is the maximum of motor’s output power.

“1” setting: Reverse speed is same as the forward speed.

“2” setting: Reverse speed has reached the maximum speed set on the programmer.



**Step 4:** Press SAVE, and the value will be stored into the tool.



## PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

### FR Mode

For forward and reverse selection options

**Step 1:** Press ENTER for mode selection.



**Step 2:** Press “<<” or “>>” to find the FR Mode, then press EDIT to enable changes.

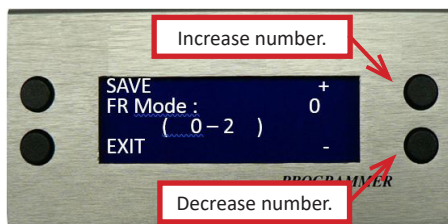


**Step 3:** Press “+” or “-” to choose the FR mode:

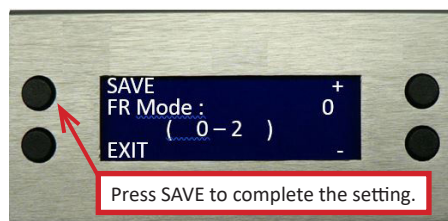
“0” setting: Enables manual operation of Forward (CW) and Reverse (CCW).

“1” setting: Forward (CW) operation resumes automatically after the tool runs in Reverse (CCW) operation once.

“2” setting: Tool operates in Forward (CW) only. Reverse (CCW) is locked out.



**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer. The set up of Forward (CW) and Reverse (CCW) selection mode on the tool is complete.





# PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

## Buzzer Volume Adjustment

**Step 1:** Press ENTER for mode selection.

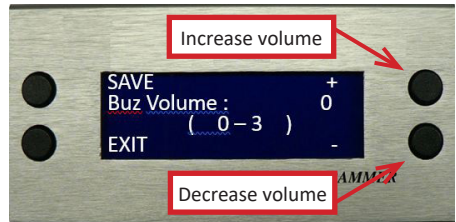


**Step 2:** Press "<<" or ">>" to find the Buz Volume mode and press EDIT to enable changes.

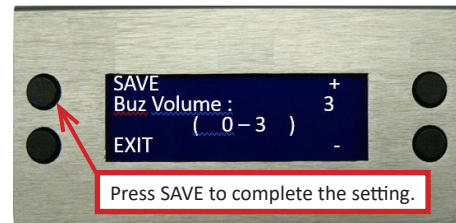


**Step 3:** Press "+" or "-" to increase or decrease the tool buzzer volume.

- 0 = Mute (no sound)
- 1 = Low buzzer volume
- 2 = Medium buzzer volume
- 3 = Loudest buzzer volume



**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer. The setting of tool buzzer volume is complete.

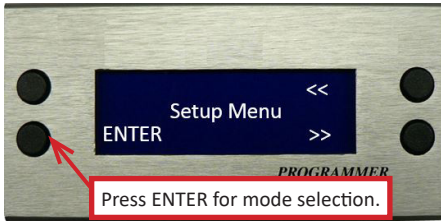


# PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

## Start\_Mode

For trigger starting options

**Step 1:** Press ENTER for mode selection.



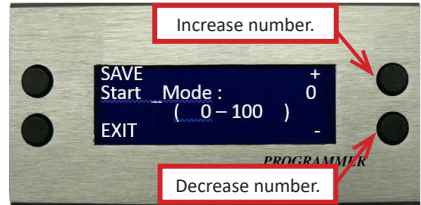
**Step 2:** Press "<<" or ">>" to find Start\_Mode, then press EDIT to enable changes.



**Step 3:** Press "+" or "-" to select Start Mode.

### "0" Setting:

- First stage of trigger pull is to switch on the LED light.
- Second stage of trigger pull will start full speed run down. If the clutch fails to trip (NG), the tool LED will show RED. Successful clutch trip will show GREEN.



### "1 - 99" Setting:

- First stage of trigger pull is to switch on the LED light.
- Second stage of trigger pull begins Soft Start. The tool will run a slow RPM for a chosen number of revolutions to assist in thread engagement. The number of rotations equals the number selected x 1.25. After completion of the preset revolutions of the tool at low RPM, the tool will ramp up to full RPM. If the clutch fails to trip (NG), the tool LED will show RED. Successful clutch trip will show GREEN.

### "100" Setting:

- First stage of trigger pull activates LED light and slow start RPM unlimited rotations.
- Second stage of trigger pull activates full speed run down. If the clutch fails to trip (NG), the tool LED will show RED. Successful clutch trip will show GREEN.

**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer.



# PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

## OnDlyx500ms For trigger delay after clutch trip option

**Step 1:** Press ENTER for mode selection.



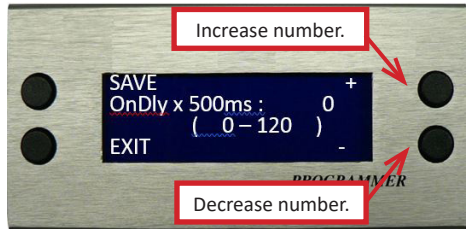
**Step 2:** Press "<<" or ">>" to find the OnDly x 500ms mode, then press EDIT to enable changes.



**Step 3:** Press "+" or "-" to select the number of OnDly x 500ms.

"0" setting: Trigger will activate on command without delay between clutch trip.

"0 – 120" setting: Trigger will not allow tool to start after clutch trip for chosen value x 500ms. This setting is typically utilized to reduce the possibility of an operator double tightening a fastener.



**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer.

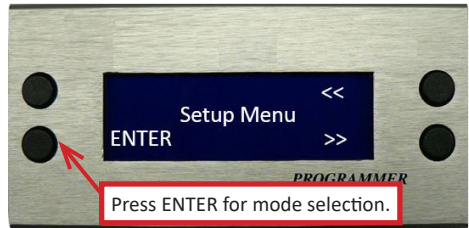


# PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

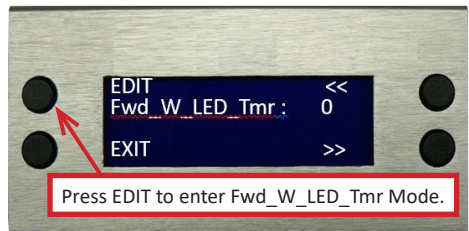
## Fwd\_W\_LED\_Tmr

To extend the luminosity of LED while in Forward operation

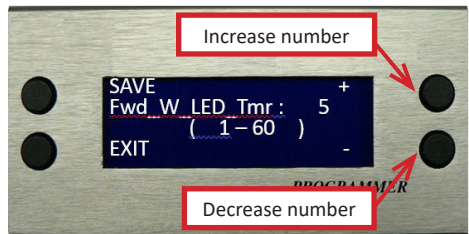
**Step 1:** Press ENTER for mode selection.



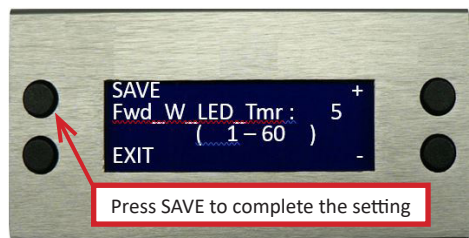
**Step 2:** Press "<<" or ">>" to find the Fwd\_W\_LED\_Tmr mode, then press EDIT to enable changes.



**Step 3:** Press "+" or "-" to set the amount of time the LED will remain lit while in Forward (CW) operation. The time can be set from 0 – 60 seconds. Longer set times may reduce time between battery charges.



**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer.



# PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

## RevTHallPulse

For setting impact number and number of rotations in reverse operation

**Functional guide:** When the tool's torque is less than the tightening torque, the tool's operation still follows the preset impact numbers, and it will automatically shut off when the setting numbers are all completed

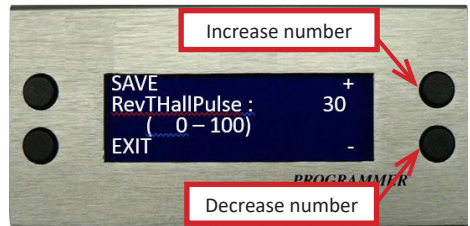
**Step 1:** Press ENTER for mode selection.



**Step 2:** Press "<<" or ">>" to find the RevTHallPulse mode and press EDIT to enable changes.



**Step 3:** Press "+" or "-" to set the preferred impact numbers in reverse operation. The settable number is from 0 – 100.



**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer.



## PRECISION CLUTCH TOOLS: PROGRAMMER OPERATION

### Rev\_W\_LED\_Tmr

To extend the luminosity of LED while in Reverse operation

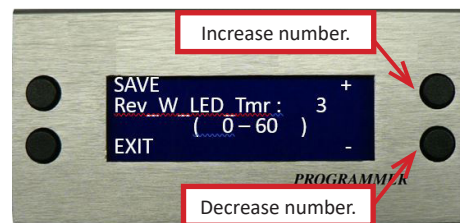
**Step 1:** Press ENTER for mode selection.



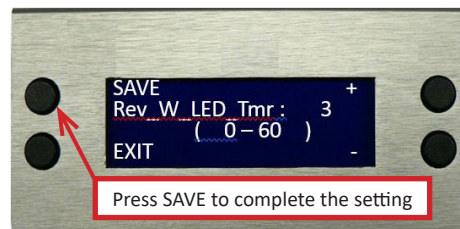
**Step 2:** Press “<<” or “>>” to find the Rev\_W\_LED\_Tmr mode, then press EDIT to enable changes.



**Step 3:** Press “+” or “-” to set the amount of time the LED will remain lit while in Reverse (CCW) operation. The time can be set from 0 – 60 seconds. Longer set times may reduce time between battery charges.



**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer.





## PRECISION CLUTCH TOOLS: INFORMATION MENU

The following programmer details can be seen under information menu.

### Product ID

Built-in information set by factory. Used for production tracking purposes. Tool S/N is etched into tool housing base at battery slide mount



### Total Used Time

Total time the tool motor has operated. Value is not changeable.



### Trip Count

Total number of clutch trips that are successful (G) since value was last cleared. Clutch trips from double hits are excluded (NG) Press ERASE to reset Trip CNT to zero.



**Note: Only clutch trip count (CNT) is resettable.  
Total tool clutch trip count is not resettable.**

### Total Count

Total number of clutch trips that are successful (G). Clutch trips from double hits are excluded (NG). Value is not changeable.

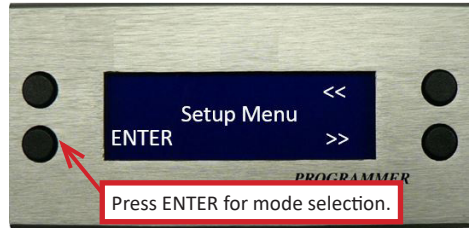


# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

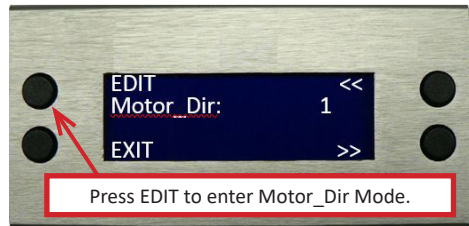
## Motor\_Dir

For selecting right-hand or left-hand thread work

**Step 1:** Press ENTER for mode selection.



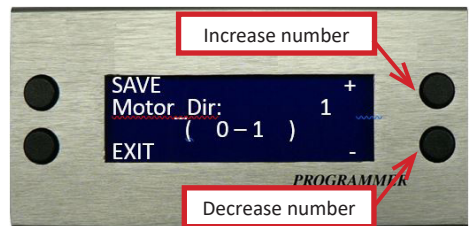
**Step 2:** Press "<<" or ">>" to find Motor\_Dir mode, then press EDIT to enable changes.



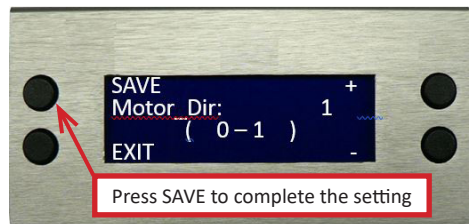
**Step 3:** Press "+" or "-" to select Right-hand or Left-hand thread work.

"0" setting: Left-hand thread is applied, reverse mode is auto shut-off, and forward is used for loosening.

"1" setting: Right-hand thread is applied, forward mode is auto shut-off, and reverse mode is for loosening.



**Step 4:** Press SAVE to store the change into the tool.



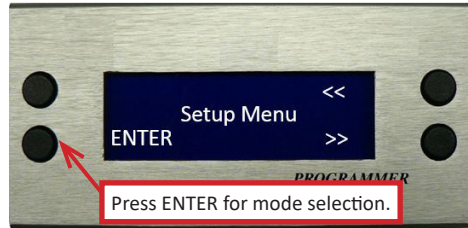


# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

## MaxImpStep

For maximum stage setting

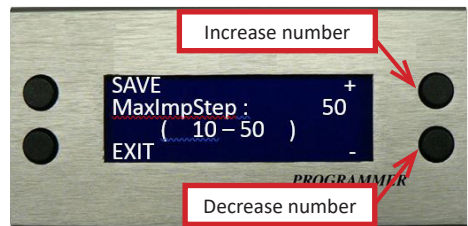
**Step 1:** Press ENTER for mode selection.



**Step 2:** Press "<<" or ">>" to find the Max-ImpStep mode, then press EDIT to enable changes.



**Step 3:** Press "+" or "-" to set the tool's maximum stage, is the maximum number that can be adjusted on tool's LED display.



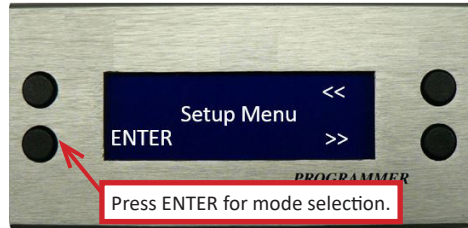
**Step 4:** Press SAVE to store the change into the tool.



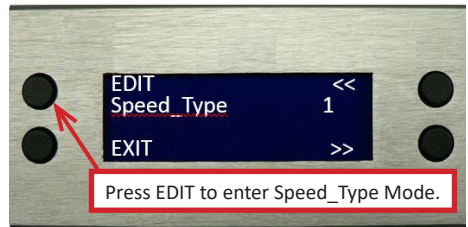
# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

## Speed\_Type For setting free speed

**Step 1:** Press ENTER for mode selection.



**Step 2:** Press "<<" or ">>" to find the Speed\_Type mode, then press EDIT to enable changes.

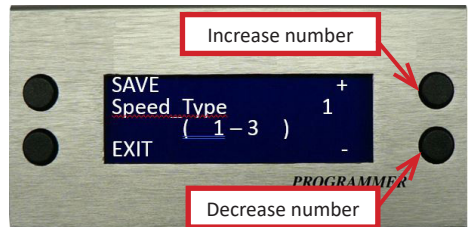


**Step 3:** Press "+" or "-" to adjust the free speed mode.

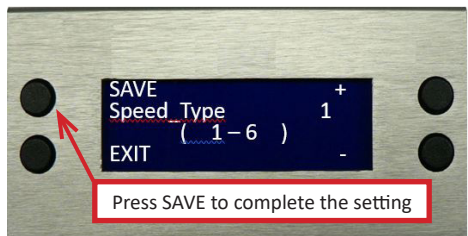
"1" setting: High Speed Mode  
RPM: 2,400.

"2" setting: Medium Speed Mode  
RPM: 2,000.

"3" setting: Low Speed Mode  
RPM: 1,500.



**Step 4:** Press SAVE to store the change into the tool.



# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

**Imp\_Pulse: (Force Value)**  
For setting impact force amount per impact

## Definition:

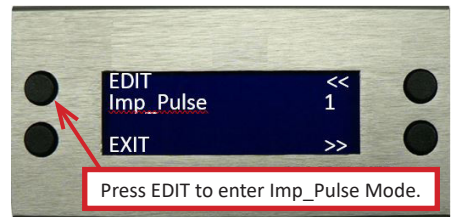
Stage Setting - adjustable LED number that operator can change on the back of the tool or with programmer [MaxImpStep]. The higher the number, the more impacts and higher final torque output. Default setting is about 5 impacts per stage which is gain value = (1).

Force Value (1–5): Default is [1]. Force per stage increases as the number selected increases [Imp Pulse]

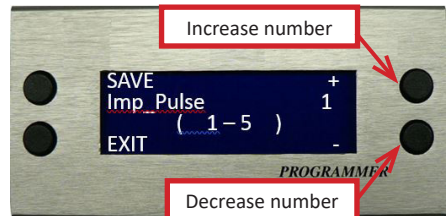
**Step 1:** Press ENTER for mode selection.



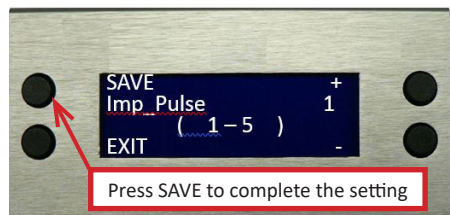
**Step 2:** Press “<<” or “>>” to find the Imp\_Pulse mode, then press EDIT to enable changes.



**Step 3:** Press “+” or “-” to adjust the impact numbers of each stage. The impact number of stage 1 is about 5. This setting enables user to increase force per impact. Increasing the value from 1–5 creates a higher force delivered per impact. Operator can reduce cycle time by increasing the force value while potentially reducing the number of impacts required to deliver the required torque to the joint. It is recommended that operator validate final torque value when adjusting both impact quantity setting and force value setting before executing production. The maximum impact number is 150.



**Step 4:** Press SAVE to store the change into the tool.

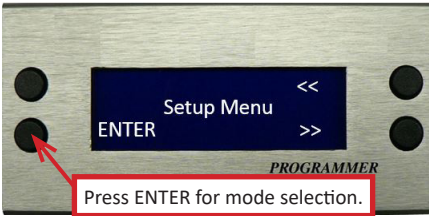


# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

## Option\_1

For selecting manual or automatic forward and reverse operation and pulse lock

**Step 1:** Press ENTER for mode selection.



**Step 2:** Press “<<” or “>>” to find the Option\_1 mode, then press EDIT to enable changes.



**Step 3:** Press “+” or “-” to choose the FR mode you prefer:

**“0” setting:** Forward and Reverse selections operate manually. Pulse setting is unlocked.

**“1” setting:** Forward operation will resume automatically after the tool runs in Reverse operation once. Pulse setting is unlocked.

**“2” setting:** Forward operation only. Pulse setting is unlocked.

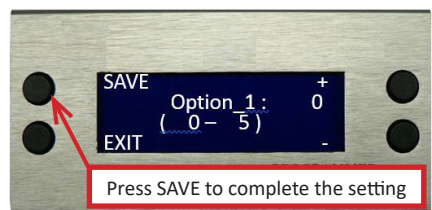
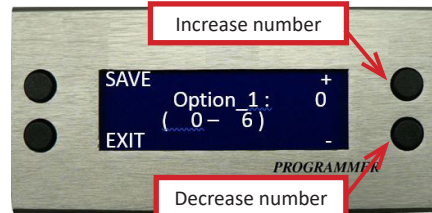
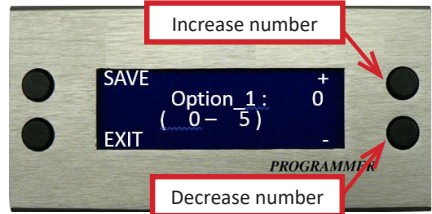
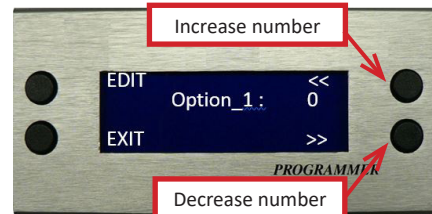
**“3” setting:** F/R mode same as “0” setting, but pulse setting is locked and can't be changed without a programmer.

**“4” setting:** F/R mode same as “1” setting, but pulse setting is locked and can't be changed without a programmer.

**“5” setting:** F/R mode same as “2” setting, but pulse setting is locked and cannot be changed without a programmer.

**“6” setting:** Reverse mode only. Stage setting is locked.

**Step 4:** Press SAVE to store the change into the tool.



# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

## Buzzer Volume Adjustment

**Step 1:** Press ENTER for mode selection.

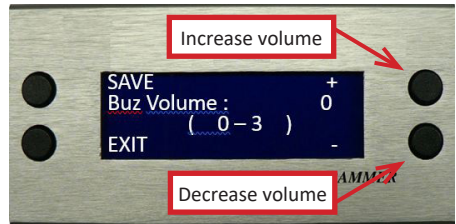


**Step 2:** Press "<<" or ">>" to find the Buz Volume mode and press EDIT to enable changes.

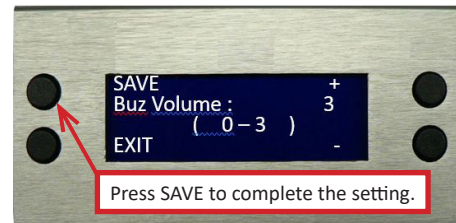


**Step 3:** Press "+" or "-" to increase or decrease the tool buzzer volume.

- 0 = Mute (no sound)
- 1 = Low buzzer volume
- 2 = Medium buzzer volume
- 3 = Loudest buzzer volume



**Step 4:** Press SAVE and the value will be stored into the tool that is connected to the programmer. The setting of tool buzzer volume is complete.





# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

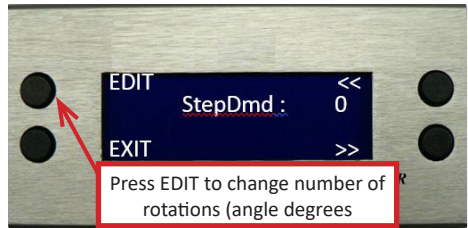
## StepDmd

For monitoring number of rotations (angle degrees)

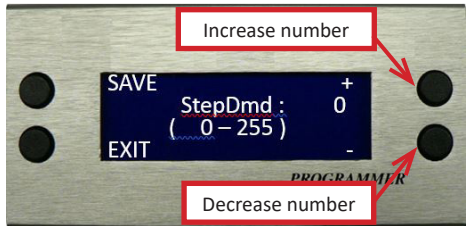
**Step 1:** Press ENTER for mode selection.



**Step 2:** Press "<<" or ">>" to find the StepDmd mode, then press EDIT to enter the Number of Rotations setting.

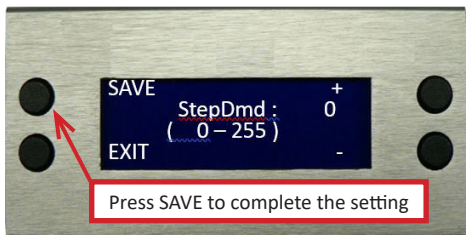


**Step 3:** Press "+" or "-" to adjust Number of Rotations (Angle degrees). Number of rotations approx. equals  $((\text{number selected} \times 0.25) - 1)$ . The number can be selected from 0 – 255; however, the numbers 0 – 6 would be invalid, depending on actual application.



- (1) When the tool's actual rotations are less than the number of rotations set, the tool LED will show Red. For example, if the selected number is 12, the number of rotations is approx.  $2((12 \times 0.25) - 1) = 2$ . If the actual tool rotation is less than 2, the tool LED will show Red.
- (2) The number of rotations differs depending on actual application. An operator can select a rough number, then adjust slightly to reach the number of actual rotations needed.

**Step 4:** Press SAVE to store the change into the tool. The number of Rotations (Angle degrees) of the tool is complete.



# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

## AutoRevStop

For adjusting reverse stop settings

**Step 1:** Press ENTER for mode selection.



**Step 2:** Press "<<" or ">>" to find the AutoRevStop mode, then press EDIT to enable changes.

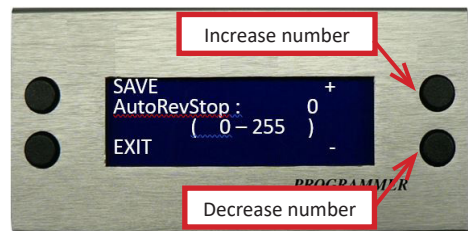


**Step 3:** Press "+" or "-" to adjust the reverse stop mode:

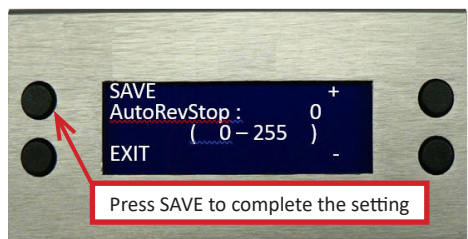
"0" setting: Tool will keep running in reverse direction at high RPM after fastener is removed.

"1" setting: Tool will keep running in reverse direction at low RPM after fastener is removed.

"2 - 255" setting: Tool will keep running in reverse direction until preset revolution is reached. The number of revolutions is approximately 3, whereas the setting number is 2. The larger the number setting, the more revolutions.



**Step 4:** Press SAVE to store the change into the tool.



# SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

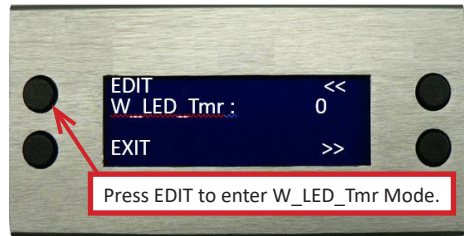
## W\_LED\_Tmr

For setting how long LED will remain lit

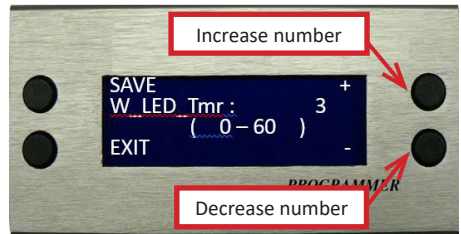
**Step 1:** Press ENTER for mode selection.



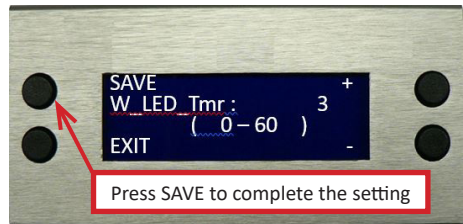
**Step 2:** Press "<<" or ">>" to find the W\_LED\_Tmr mode and press EDIT to enable changes.



**Step 3:** Press "+" or "-" to set the amount of time the LED will remain lit while in Forward or Reverse operation. The time can be set from 0 – 60 secs. Longer set times may reduce time between battery charges.



**Step 4:** Press SAVE to store the change into the tool.





## SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

The following programmer details can be seen under information menu.

### Product ID

Built-in information set by factory. Used for production tracking purposes. Tool S/N is etched into tool housing base at battery slide mount



### Total Used Time

Total time the tool motor has operated. Value is not changeable.



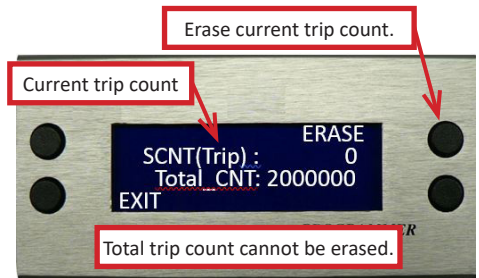
## SHUT-OFF IMPACT TOOLS: PROGRAMMER OPERATION

Screw\_CNT Menu: SCNT (Trip) / Total\_CNT  
For viewing current trip count and total trip count

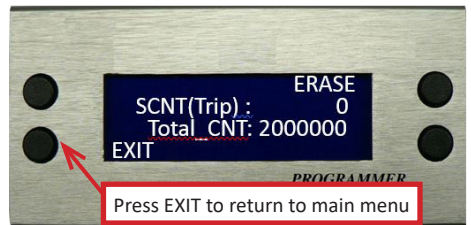
**Step 1:** Press ENTER from the Screw\_Cnt Menu to view trip counts.



**Step 2:** View current trip count and total trip count. Press ERASE to clear/reset the current count.



**Step 3:** Press EXIT to return to the main menu.







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