

# Instruction Manual

# Signature Series

# 20V Cordless Shut-Off Impact Tool (Brushless Motor)



Model Numbers SIW-P2525Q SIW-P3225Q SIW-P3238 SIW-P5538 SIW-P5550 SIW-P10050 SIW-P12050



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# WRENCH FUNCTION GUIDE



(A)	LED indicator provides simple process information to the operator. The signal is visible from any angle.		
(B)	LED light for working in dark area.		
(C)	Variable speed control trigger. Non-contact switch provides longer life with less downtime.		
(D)	F/R button for easy ergonomic operation.		
(E)	Shock absorbing, ergonomic grip provides less fatigue with well-bal- anced operation.		
(F)	Li-ion battery offers longer life with no memory effect.		
(G)	Smart battery with capacity indicator.		

An optional programmer is available that allows you to make changes to tool functions. See <u>SPC-2-PGM programmer manual</u> for details.

# SCREWDRIVER FUNCTION GUIDE



(A)	LED indicator provides simple process information to the operator. The signal is visible from any angle.	
(B)	LED light for working in dark area.	
(C)	Variable speed control trigger. Non-contact switch provides longer life with less downtime.	
(D)	F/R button for easy ergonomic operation.	
(E)	Shock absorbing, ergonomic grip provides less fatigue with well-bal- anced operation.	
(F)	Li-ion battery offers longer life with no memory effect.	
(G)	Smart battery with capacity indicator.	
(H)	1/4" hex with quick change chuck.	

An optional programmer is available that allows you to make changes to tool functions. See <u>SPC-2-PGM programmer manual</u> for details.

**WARNING! READ ALL INSTRUCTIONS**. Always observe the safety regulations applicable in your country to reduce the risk of fire, electric shock, and personal injury. Understand the following safety instructions before attempting to operate this product. Always wear eye protection when working with power tools. Keep these instructions in a safe place.

### READ AND SAVE THESE INSTRUCTIONS

# **General Safety Rules**

### Work Area Safety

- Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

### Personal Safety

- Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair,

clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.

- Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control on the tool in unexpected situations.
- Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

### Tool Use and Care

- Use clamps or other practical ways to secure and support the work piece to a stable platform. Holding the work piece by hand or against your body is unstable and may lead to loss of control.
- Do not force tools. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.

- Do not use tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
- Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- Use only Signature Series recommended accessories for your tool model. Accessories that may be suitable for one tool, may become hazardous when used on another tool.

### <u>Service</u>

- Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
- When servicing an AIMCO Signature Series tool, it is important to use AIMCO Signature Series Parts, and all work should be undertaken by a qualified AIMCO Signature Series Authorized Technician. Use of unauthorized parts or work performed by a non-authorized technician will void warranty and may create a risk of damage to the tool, risk of electric shock, or injury to a user.

# Additional Safety Rules for Shut-Off Impact Tool

### **Battery Charger**

- Caution: To reduce risk of injury, charge only the authorized batteries. Other types of batteries may burst, causing personal injury and damage.
- Before using battery charger, read all instructions and cautionary markings on batteries, chargers, and products using batteries.
- Do not allow anything to cover or clog the charger vents.
- Do not expose charger to rain, snow or wet conditions.
- To reduce the risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.

- Use of an attachment not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.
- Make sure cord for charger is located so that it will not be stepped on, tripped on, tripped over, or otherwise subjected to damage or stress.
- Do not abuse the power cord. Never use the cord to carry the charger. Keep cord away from heat, oil, water, sharp edges, or moving parts. Replace damaged cords immediately.
- Do not operate charger if it has been damaged in any way, take it to a qualified service center for repair.
- To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.
- Do not disassemble charger or battery cartridge. Take it to a qualified service center when repair is required. Incorrect reassembly may result in risk of electric shock or fire.

### **Battery Pack**

 Do not charge battery pack when temperature is below 0°C (32°F) or above 40°C (104°F). Do not attempt to use a step-down transformer, an engine generator, or DC power receptacle.

- Do not short the battery pack: Do not touch the terminals with any conductive material. Avoid storing battery cartridge in a container with other metal objects such as nails, coins, paper clips, etc.
- Do not expose battery cartridge to water or rain. A battery short can cause large current flow, overheating, possibly burns and even a break-down.
- Do not store the machine and battery pack in locations where the temperature may reach or exceed 50°C (122°F).
- Do not incinerate the battery pack even if it is severely damaged or completely worn out. The battery pack can explode in a fire.
- Be careful not to drop, shake, or strike the battery.
- Do not charge inside a box or container of any kind. The battery must be placed in a well-ventilated are during charging.
- Do not dispose of battery packs into household waste, fire, or water. Battery packs should be collected, recycled or disposed of in an environmentally-friendly manner. Call the authorized warranty centers for locations to dispose of damaged or inoperable batteries.

# WRENCH FUNCTIONS

This industrial shut off wrench is designed for nut tightening/loosening and screw driving/loosening. It is not appropriate to use for wood/mild steel drilling. Please refer to the figure to familiarize yourself with the major components of this tool before use.



### 1. Power Switch

Depressing the power switch will energize the LED light (2) in front, and the tool starts to rotate. When released, power to the motor ceases and the tool stops working immediately. The LED light will remain for 5 seconds, then shut off.

# 2. LED Light

# 3. Forward/Reverse Button

The tool is always in forward operation unless the Forward/Reverse button is pressed. When the button is pressed, the blue LED light sustains, and the yellow and green LED lights flash together. This indicates the tool is in reverse operation mode. To get the tool back in forward operation, simply press the button again, the LED lights shut off, and the tool is back in forward operation mode.

# 4. Anvil (Drive Shaft)

The anvil will accept drive hex socket. Be sure the socket is fully inserted before operating tool. Otherwise, the socket may fly off and cause property damage or personal injury.

**WARNING:** Use only impactgrade sleeve sockets.

### 5. Li-ion Battery

This battery provides electrical power to the motor. Please charge it according to the charging instruction listed in this manual.

**WARNING:** Use the tool to either tighten or loosen nuts and screws ONLY in stipulated torque and voltage ranges.

#### IMPORTANT INFORMATION

- No lights on the tool indicates the tool is in SLEEP mode. To wake up the tool, just press the trigger. The tool will be ready to use.
- After operating the tool, the impulse setting number will remain on the display for 5 mins. As the number disappears, the tool goes into SLEEP mode.

# SCREWDRIVER FUNCTIONS

This industrial shut off screwdriver is designed for nut tightening/loosening and screw driving/loosening. It is not appropriate to use for wood/mild steel drilling. Please refer to the figure on the page to familiarize yourself with the major components of this tool before use.



#### 1. Power Switch

Depressing the power switch will energize the LED light (2) in front, and the tool starts to rotate. When released, power to the motor ceases and the tool stops working immediately. The LED light will remain for 5 seconds, then shut off.

### 2. LED Light

#### 3. Forward/Reverse Button

The tool is always in forward operation unless the Forward/Reverse button is pressed. When the button is pressed, the yellow and green LED lights flash together, and the tool switches to reverse

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operation. To switch the tool back

to forward operation, simply press the button again. The LED lights shut off and the tool is back in forward operation.

### 4. Quick Change Holder

This driver accepts only 1/4" (6.35 mm) hex bits. Be sure the bit is fully engaged by the chuck before operating tool. Otherwise, the bit may fly off and cause property damage or personal injury.

### 5. Li-Ion Battery

This battery provides electrical power to the motor. Please charge it according to the charging instruction listed in this manual.

**WARNING:** Use the tool to either tighten or loosen nuts and screws ONLY in stipulated torque and voltage ranges.

#### **IMPORTANT INFORMATION**

- No lights on the tool indicates the tool is in SLEEP mode. To wake up the tool, just press the trigger. The tool will be ready to use.
- After operating the tool, the impulse setting number will remain on the display for 5 mins. As the number disappears, the tool goes into SLEEP mode.

# ASSEMBLY

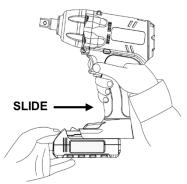
Check for damage to the tool, parts, or accessories that may have occurred during transport. Take the time to thoroughly read and understand this manual prior to operation.

This tool kit contains:

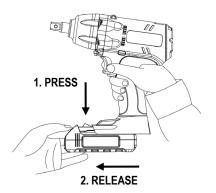
- 1 20V Cordless Shut-Off Impact Tool
- 1 Battery
- 1 Bail
- 1 Body Jacket
- 1 Instruction Manual

# Attaching or Removing Battery Pack

1. To connect battery, line up the tracks and attach the battery pack. Slide battery pack toward tool until it locks into position with a click.



2. To remove the battery pack, press the button on the top of the battery pack and release the battery.



# **OPERATION**

**WARNING!** Read the manual instruction before operating the tool. Always wear safety glasses or face shields when operating this product. Failure to do so can result in dust, shavings, or loose particles being thrown into your eyes.

This product has been carefully inspected prior to leaving the factory. It should provide you with years of satisfying service under normal operating conditions. Do not, however, force the tool to perform outside its design parameters. Such usage will void the warranty.

- Slide battery into the bottom of the housing handle until a click sound occurs. Do not force battery: It should slide easily into place with nominal force. Any difficulty doing so indicates an incorrect alignment.
- 2. Select proper size drive bit and insert into the quick-change holder.
- Depress the trigger to engage the LED light and start the tool. Check the torque on the digital tester to see if the desired torque reached. Torque can also be adjusted by using the torque setting button.
- 4. When torque is reached, the tool will shut off automatically.

# Forward / Reverse Rotation Switch Operation

To prevent damage, do not press Forward/Reverse button until the anvil comes a complete stop.

# Forward Rotation Operation:

The tool is in forward operation if the blue light is unlit.

# **Reverse Rotation Operation:**

Reverse operation can be adjusted by pressing the Forward/Reverse button.

Tool needs to be adjusted manually to return to Forward operation after reverse operation.

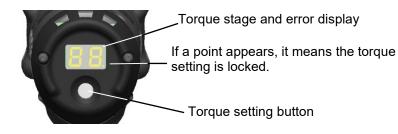
# Lock the Reverse

- 1. Remove the battery pack
- 2. Press one of the F/R switches.
- 3. Insert the battery pack.
- After 6 sec. release the F/R switch while the warning noise sounds.
- 5. When the warning noise sounds again, the setting is complete.

**Note:** When the Reverse Locked mode is set, the tool will always run in a forward direction — the reverse switches will be inoperative.

6. To remove the reverse lock function, repeat the same process.

# TORQUE ADJUSTMENTS



### Adjusting the Torque Setting

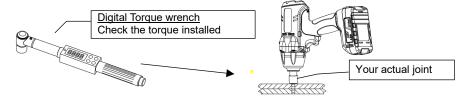
Press the torque setting button until the number blinks. Set proper number, then press the trigger or wait for 5 secs to complete the torque setting.

Number "00" indicates Non Shut-Off mode and Number "01" – "50" indicate Auto Shut-Off mode. The larger the number, the higher the torque.

# Lock the Torque Setting

- 1. Remove the battery pack
- Press the trigger and one of the F/R switches at the same time.
- 3. Insert the battery pack.
- Wait for 6 sec. until you hear a beep sound. Release the trigger and F/R switch together. The torque setting is then locked.
- 5. To unlock the torque setting, repeat the same process.

# **TESTING TORQUE**



Status of the Tool LED Indicator and Beeper	Tool Status	Action to be Taken
LED lights RED, YELLOW, and GREEN together for one second. A long beep for one second.	Tool is OK to use	-
LED lights RED for one second. A long beep for one second	Preset torque is not reached	Screwing fastener must be performed again.
LED lights GREEN	Preset torque is reached and tight- ening is OK.	-
LED blinks YELLOW five times Five short beeps	Battery power is low.	Recharge battery or replace with fully charged battery.
LED lights YELLOW for five seconds A long beep for five seconds	Battery power is depleted. Tool stops immediately.	Recharge battery or replace with fully charged battery.
LED lights BLUE and blinks in YELLOW and GREEN	Tool is in reverse operation mode.	-

If audited torque is <u>low</u>, then <u>increase</u> torque adjustment (page 11). If audited torque is <u>high</u>, then <u>decrease</u> torque adjustment (page 11). Retest after adjustment.

# **CHARGING THE LI-ION BATTERY**

# Li-ion Battery Pack

**NOTE:** Your battery pack is not fully charged at time of purchase. Be sure to charge the battery before first use.

- Remove the battery pack when the tool is idle for a long time.
- Recharge the battery pack once every 6 months even if the battery is not in use.
- Batteries should be charged in ambient temperatures between 0°C (32°F) and 40°C (104°F). Charging outside this range will result in either less than full charge or damage to battery pack.
- Allow the charger to cool when charging more than two battery packs consecutively.
- Do not insert your fingers/body parts into contact area of charger.

# Charging the Battery

- 1. Place charger in a relatively cool and well-ventilated area.
- Plug charger into the AC outlet.
  CAUTION: Ensure that the power source to be utilized conforms to the power requirement specified on the product nameplate.
- Turn the battery upside down and slide it into the charger while keeping the alignment marks aligned. Slide forward in the direction of the arrow. Do not force battery: It should slide easily into place with

nominal force. Any difficulty doing so indicates incorrect alignment.



- If the power lamp (red) does not light immediately or goes out soon after the charger is plugged in, consult a Signature Series authorized dealer.
- During charging, the charging lamp (green) will flash. When charging is complete, an internal electronic switch will automatically be triggered to prevent overcharging.
  - Charging will not start if the battery pack is warm; for example, immediately after heavyduty operation. The yellow standby lamp will flash until the battery cools down.
- 6. If the temperature of the battery pack is 0°C (32°F) or less, charging will take longer to fully charge the battery pack than standard charging time. At this low temperature, even when the battery is fully charged, it will have approximately 50% of the power of a fully charged battery at normal operation temperature.
- Once battery is fully charged, the green lamp will light to indicate the charge has entered into a trickle charge mode

# TROUBLESHOOTING

LED Error Mode	Error Cause	Solution
E2	Motor overheated	Remove battery pack and let cool
E3	Motor damaged	Send to repair center for service
E4	Connector wire has failed.	Send to repair center for service
E8	Excess of current and tool is stuck.	Send to repair center for service

# SPECIFICATIONS

	Model	Model
	SIW-P2525Q	SIW-P3225Q
Voltage	20 VDC	20 VDC
Drive Size	6.35 mm Hex. (1/4")	6.35 mm Hex. (1/4")
Screw Size	M5, M6	M6
Torque Range	3 ~ 25 Nm (2 ~ 18 ft-lb)	6 ~ 32 Nm (4 ~ 24 ft-lb)
Max. Torque	40 Nm (30 ft-lb)	90 Nm (66 ft-lb)
Free Speed	2,400 rpm	2,400 rpm
Weight W/O Battery	1.0 kg (2.2 lb)	1.0 kg (2.2 lb)
Noise Level	71 dB(A)	71 dB(A)
Battery Type	Li-lon 2.0 / 4.0 Ah	Li-Ion 2.0 / 4.0 Ah

	Model SIW-P3238	Model SIW-5538
Voltage	20 VDC	20 VDC
Drive Size	9.5 mm Sq. (3/8")	9.5 mm Sq. (3/8")
Screw Size	M6	M8
Torque Range	6 ~ 32 Nm (4 ~ 24 ft-lb)	15 ~ 55 Nm (11 ~ 41 ft-lb)
Max. Torque	90 Nm (66 ft-lb)	120 Nm (90 ft-lb)
Free Speed	2,400 rpm	2,400 rpm
Weight W/O Battery	1.0 kg (2.2 lb)	1.1 kg (2.4 lb)
Noise Level	71 dB(A)	71 dB(A)
Battery Type	Li-Ion 2.0 / 4.0 Ah	Li-Ion 2.0 / 4.0 Ah

	Model SIW-P5550	Model SIW-P10050	Model SIW-P12050
Voltage	20 VDC	20 VDC	20 VDC
Drive Size	12.7 mm Sq. (1/2")	12.7 mm Sq. (1/2")	12.7 mm Sq. (1/2")
Screw Size	M8	M8, M10	M10, M12
Torque Range	15 ~ 55 Nm (11 ~ 41 ft-lb)	25 ~ 100 Nm (18 ~ 74 ft-lb)	30 ~ 120 Nm (22 ~ 89 ft-lb)
Max. Torque	120 Nm (90 ft-lb)	180 Nm (133 ft-lb)	210 Nm (155 ft-lb)
Free Speed	2,400 rpm	2,400 rpm	2,400 rpm
Weight W/O Battery	1.1 kg (2.4 lb)	1.1 kg (2.4 lb)	1.3 kg (2.9 lb)
Noise Level	71 dB(A)	71 dB(A)	71 dB(A)
Battery Type	Li-lon 2.0 / 4.0 Ah	Li-lon 2.0 / 4.0 Ah	Li-Ion 2.0 / 4.0 Ah

# Red Light

Z

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Charger is plugged into the AC outlet. Ready to charge.

# Yellow Flashing Light

- (1) When the temperature of the battery is too low (<0°C(<32°F)), it is in a trickle charge mode until the temperature of the battery goes up to over 0°C(<32°F). The lamp will change from Yellow Flashing to Green Flashing automatically and start to charge. (If after 70 minutes, the lamp changes from yellow flashing to yellow light, consult an authorized dealer.)
- (2) When the temperature of the battery is too high (>40°C(104°F)), it is in a trickle charge mode until the temperature of the battery drops to under 40°C(104°F). The lamp will change from Yellow Flashing to Green Flashing automatically and start to charge. (If after 70 minutes, the lamp changes from yellow flashing to yellow light, consult an authorized dealer.)
- (3) When the voltage of the battery is too low (below <u>14.4</u> voltage), it is in a trickle charge mode until the voltage of the battery reaches to the standard value. The lamp will change from Yellow Flashing to Green Flashing automatically and start to charge. (If after 20 minutes, the lamp changes from yellow flashing to yellow light, consult an authorized dealer.)

# Yellow Light

The battery and the charger are not connected. If the yellow light still on after trying re-attach the battery, consult an authorized dealer.

Green Flashing Light Now start charging Light

**Green Flashing Light** Battery is approximately 50% charged.

# **Green Flashing Light**

Battery is approximately 80% charged.

Green Light Charging is complete. (Fully charged.)



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