












# SCEPTOR

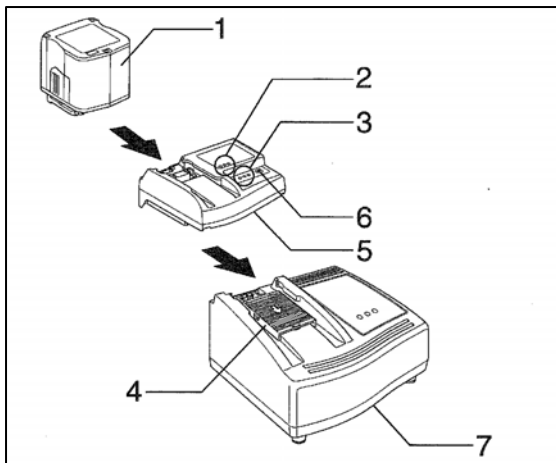
Industries, Inc.

## SC-01081 Battery Conditioner

### Symbols

The following show the symbols used for the Conditioner and Charger. Be sure that you understand their meaning before use.

	o Indoor use only		o Defective battery
	o Read instruction manual		o Conditioning
	o Ready to charge		o Cooling abnormality
	o Charging		o Automatic refreshing charge
	o Charging complete		o Conditioned refreshing charge
	o Delay charge (Cooling)		



### General View Key

1. Battery
2. Charging lights
3. Refreshing lights
4. Terminal cover
5. Automatic refreshing adapter
6. Conditioned refreshing button
7. Battery Charger

## IMPORTANT SAFETY INSTRUCTIONS

1. SAVE THESE INSTRUCTIONS - This manual contains important safety and operating instructions for battery charger.
2. Before using refreshing adapter, read all instructions and cautionary markings on (1) refreshing adapter (2) battery charger, (3) battery, and (4) product using battery.
3. CAUTION - To reduce risk of injury, charge only Sceptor Industries rechargeable batteries. Other types of batteries may burst causing personal injury and damage.
4. Do not expose charger and adapter to rain or snow.
5. Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
6. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.
7. Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
8. An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure:
  - a. That pins on plug of extension cord are the same number, size, and shape as those of plug on charger;
  - b. That the extension cord is properly wired and in good electrical condition; and
  - c. That the wire size is at least as large as the one specified in the table below.

**TABLE 1: RECOMMENDED MINIMUM AWG SIZE FOR EXTENSION CORDS FOR BATTERY CHARGERS**

Length of cord (feet)	25	50	100	150
AWG size of cord	18	18	18	15

9. Do not operate charger with damaged cord or plug - replace them immediately.
10. Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; contact Sceptor Industries Inc. for repairs.
11. Do not disassemble charger or battery; contact Sceptor Industries, Inc. when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
12. To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.

### ADDITIONAL SAFETY RULES FOR CHARGER & BATTERY

1. Do not charge battery when temperature is BELOW 10°C (50°F) or ABOVE 40°C (104°F).
2. Do not attempt to use a step-up transformer, an engine generator or DC power receptacle.
3. Do not allow anything to cover or clog the charger vents.
4. A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
  - (1) Do not touch the terminals with any conductive material.
  - (2) Avoid storing battery in a container with other metal objects such as nails, coins, etc.
  - (3) Do not expose battery to water or rain.
5. Do not store the tool and battery in locations where the temperature may reach or exceed 50°C (322°F).
6. Do not incinerate the battery even if it is severely damaged or is completely worn out. The battery can explode in a fire.

### CAUTION:

- o Use this adapter with Sceptor Industries Battery Charger assembly (SC-1082).

- Use a power source with the voltage specified on the nameplate of the charger.
- Do not charge the battery in a location exposed to direct sunlight.
- Do not charge the battery in presence of flammable liquids or gases.
- Charge the battery with room temperature at 10°C - 40°C (50°F - 104°F).
- Never carry charger by cord or yank it to disconnect from receptacle.
- Do not expose charger and adapter to rain or snow.
- Non-rechargeable batteries cannot be charged with this adapter.
- Do not attempt to use a step-up transformer, an engine generator or DC power receptacle.
- Do not allow anything to cover or clog the charger vents.
- After charging, unplug the charger from the power source. Do not disassemble charger and adapter.
- The battery charger is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the battery charger.

### Automatic refreshing charge

1. Insert the adapter into charger until it stops adjusting to the guide of charger. Terminal cover of charger can be opened with inserting and closed with pulling out the adapter.
2. Plug the battery charger into your power source. Two charging lights will flash in green color repeatedly.
3. Insert the battery into adapter until it stops adjusting to the guide of adapter.
4. When the battery is inserted, the adapter selects normal charge or automatic refreshing charge automatically.
5. When the adapter selects normal charge, the charging light colors will change from green to red and normal charge will begin.
6. When the adapter selects automatic refreshing charge, the charging light colors will change from green to red and one refreshing light will flash green repeatedly and quickly. Then, automatic refreshing charge will begin.
7. With the finish of normal charge and automatic refreshing charge, the charging light colors will change from red to green.
8. When you press the conditioned refreshing button, the charging light colors will change from green to red and one refreshing light will flash green repeatedly. Then, conditioned refreshing charge will begin.
9. With the finish of conditioned refreshing charge, the charging light colors will change from red to green. Then, the refreshing lights indicate the battery capacity compared with a new battery.

**TABLE 2: THE INDICATION OF REFRESHING LIGHTS\***

Refreshing Lights	Indication
⊠ ○ ○	Automatic refreshing charge
○ ○ ⊠	Conditioned refreshing charge
● ● ●	Capacity is 80% - 100%. (new battery)
● ● ○	Capacity is 60% - 80%. (wearing battery)
● ○ ○	Capacity is 40% - 60%. Indicates a short service life. (wearing battery)
○ ○ ○	Capacity is 0% - 40%. Charging lights flash alternately in green and red color. Indicates the battery is worn out.

\*(●: On; ⊠: Flashing; Off :○)

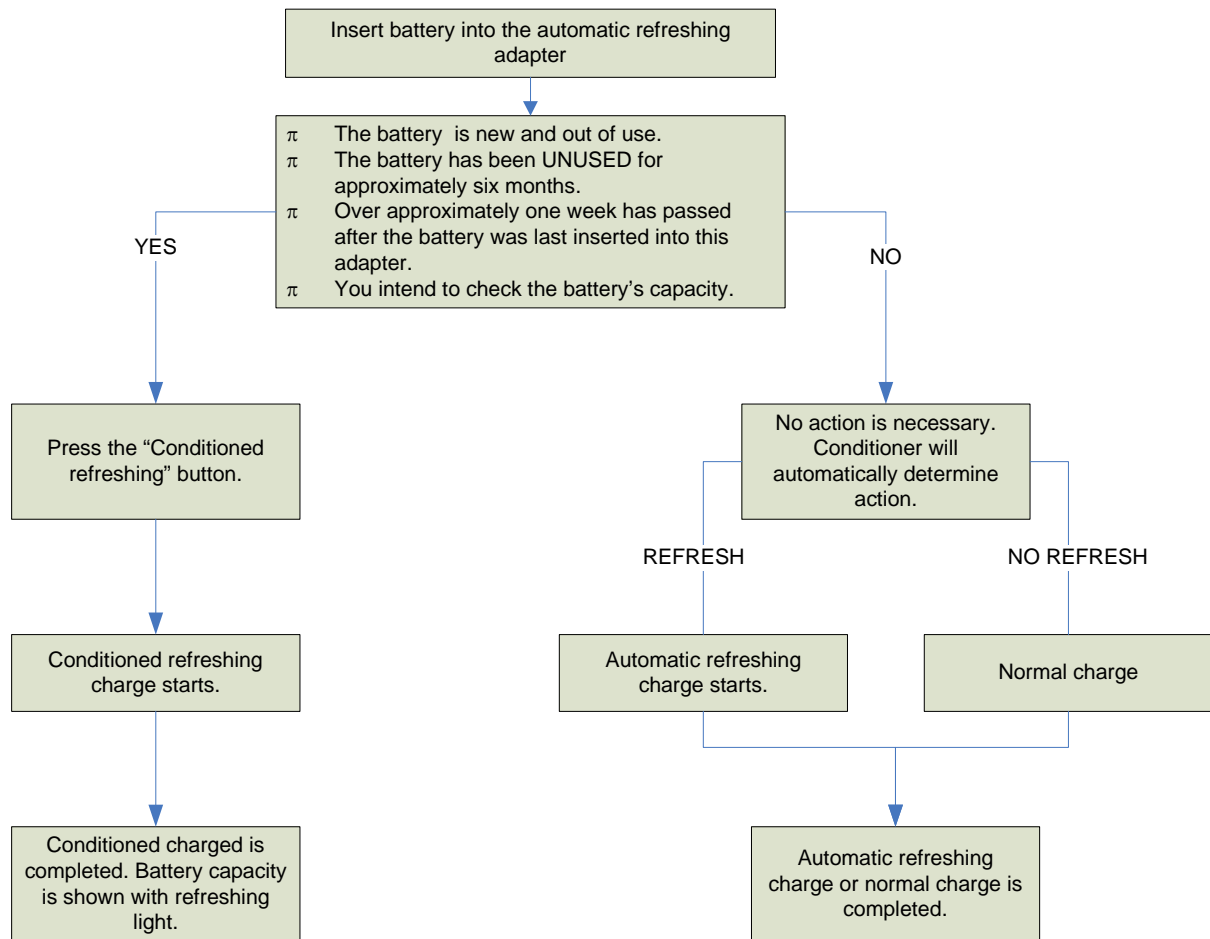
Table 3: Charging Times

Charge type	Time
Automatic refreshing charge	60 min. – 240 min.
Conditioned refreshing charge	Approx. 10 hours
Normal charge	60 min.

10. After Charging, unplug the charger from the power source.

## How to use the automatic refreshing adapter

Follow the directions below. “Yes” must be followed if one or more bullets are true. “No” will be followed otherwise.



## Automatic refreshing charge

- The adapter can keep the battery in activate condition automatically by quick refreshing the charge this will search the optimal refreshing interval for the individual battery.
- The automatic refreshing time depends on the remainder of the battery capacity.
- After automatic refreshing charge, the refreshing lights will not indicate the capacity for a new battery.

## Conditioned refreshing charge

When the battery is employed in the following conditions, press the conditioned refreshing button. Then, the battery will be activated by conditioned refreshing charge.

- The battery is new and out of use.
- The battery has been UNUSED for approximately six months.
- Over approximately one week has passed after the battery was last inserted into this adapter. You intend to check the battery capacity.
- After conditioned refreshing charge, the refreshing lights indicate the battery capacity for a new battery.

## Cooling system

- The charger is equipped with cooling fan for heated battery in order to enable the battery to prove its own performance.
- Sound of cooling air comes out during cooling, which means no trouble on the charger.
- Yellow light will flash for warning in the following cases.
- Trouble on cooling fan
- Incomplete cool down of battery, such as, being clogged with dust
- The battery can be charged in spite of the yellow warning light. But the charging time will be longer than usual in this case.
- Check the sound of cooling fan, vent on the charger, adapter and battery, which can be sometimes clogged with dust.
- The cooling system is in order although no sound of cooling fan comes out, if the yellow warning light will not flash.
- Always keep clean the vent on charger, adapter and battery to allow for maximum cooling.
- The products should be sent to repair or maintenance, if the yellow warning light frequently flashes.

## Conditioning charge

Conditioning charge can extend the life of the battery by automatically searching the optimum charging condition for the batteries in every situation.

The battery employed in the following conditions repeatedly, will be worn out shortly, and yellow warning light may flash.

1. Recharge of battery at its high temperature
2. Recharge of battery at its low temperature
3. Recharge of full charged battery
4. Over-discharge of battery (continuing to discharge battery in spite of power down.)
5. Recharge under broken cooling system (The charging time of such battery will be longer than usual).

## Tips for maintaining maximum battery life

1. Charge the battery before completely discharged. Always stop operation and charge the battery when low power is indicated.
2. Never recharge a fully charged battery. Overcharging shortens the battery service life.

3. Charge the battery with room temperature at 10°C - 40°C (50°F - 104°F). Let a hot battery cool down before charging it.
4. Charge the Nickel Metal Hydride battery when you do not use it for more than six months.

**NOTE:**

- The battery charger and adapter are for charging Sceptor Industries batteries. Never use it for other purposes or for other manufacturer's batteries.
- When you charge a new battery or a battery which has not been used for a long period of time, it may not accept a full charge. This is a normal condition and does not indicate a problem. You can recharge the battery fully after discharging it completely and recharging a couple of times or after refresh charging.
- If you charge a battery from directly after use or a battery which has been left in a location exposed to direct sunlight for a long time, the charging light may flash in red color. If this occurs, wait for a while. Charging will begin after the battery is cooled by the cooling fan installed in the charger. When the temperature on battery is more than approx. 70°C (158°F), two charging lights may flash in red color, and when approx. 50°C - 70°C (122°F - 158°F) , one charging light in red color.
- If the charging light flashes alternately in green and red color, charging is not possible. The terminals on the charger, adapter or battery are clogged with dust or the battery is worn out or damaged.
- Any of the following conditions indicates damage to the charger, adapter and or battery. Contact Sceptor Industries with any questions.
  1. The charging light does not flash (green) when the battery charger is plugged into a power source.
  2. The charging light does not light up or flash (red) when the battery is inserted in the adapter port.
  3. Normal charging is not completed at even more than two hours after red light comes ON at start of normal charging.
  4. Refresh charging is not completed at even more than 15 hours after start of refresh charging.

## MAINTENANCE

**CAUTION:**

Always be sure that the charger is unplugged and the battery is removed before attempting to perform inspection or maintenance.

To maintain product SAFETY and RELIABILITY, repairs, maintenance or adjustment should be performed by Sceptor Industries, Inc.



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8301 State Line Road, Suite 101, Kansas City, MO 64114 ● Toll-free: 888-450-4321 ● Office: 816-360-3895 ● Fax: 816-931-2451