Snap-on.

Snap-On Tools Corporation
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Snap-on.

# ACS9050/ACTR9150 AUTOMATIC PROGRAMMABLE CHARGING METERS

## OWNER'S MANUAL

## TABLE OF CONTENTS

## INTRODUCTION

Thank you for purchasing the Snap-on Automatic Programmable Charging Meter. Your new unit has been designed to provide many years of dependable service. Please read this manual completely before using your meter in order to gain the full benefit of its features. The ACS9050 or ACTR9150 will allow you to quickly and efficiently charge refrigerant into any air conditioning system. It is the most accurate and cost effective method of dispensing refrigerant. The high weight capacity and large charging platform will allow use of any size cylinder, including recovery/recharge tanks. High resolution enables precise charging for optimum economy and system performance. A durable "load-cell" mechanism is built into the unit to withstand rugged field use and ensure performance longevity.

Proper operation of this meter will allow you to handle all charging operations required to operate efficiently in today's constantly changing and highly regulated air conditioning and refrigeration environment.

NOTE: This manual covers two models of charging meters:
ACS9050: For R12 Applications
ACTR9150: For R134a Applications



## FEATURES

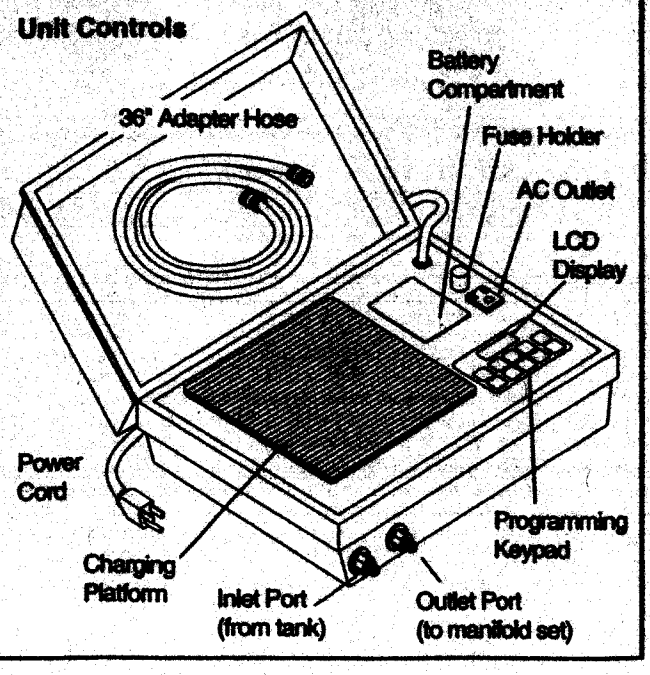
**Features of the Automatic Programmable Charging Meter:**

- Programmable, allows user to pre-set amount for automatic charge
- Electronic keypad controls
- 150 pound (68kg) maximum weight capacity
- Hold function, stores charge in memory if cylinder empties before charge is completed
- Solenoid compatable with all refrigerants
- Large, easy to read, digital display
- Pounds/kilograms selection capability
- 1/2 ounce resolution/accuracy
- Large, 9" square platform
- Accessory outlet
- Battery/AC power supply
- Built-in to rugged carrying case
- One year warranty
- Made in the U.S.A.



## PARTS & CONTROLS

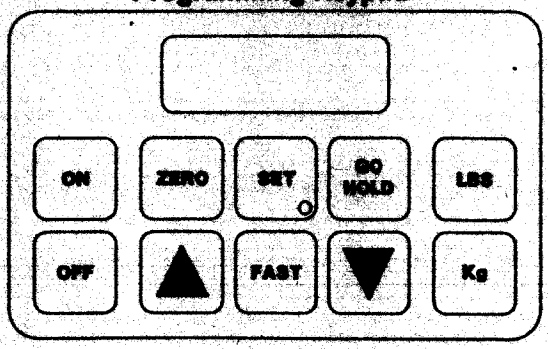
**Unit Controls**






## KEYPAD FUNCTIONS

**Programming Keypad**




**Key Functions**

**ON:** Turn unit on
**OFF:** Turn unit off
**ZERO:** Zero display
**SET:** Enter program weight
▲ : Increase program weight
▼ :Decrease program weight
**FAST:** Increase weight programming speed
**GO:** Start system charging
**HOLD:** Pause and change refrigerant cylinder
**LBS:** Weigh in pounds
**Kg:** Weigh in kilograms

## PRECAUTIONS

**Please read carefully before operating the unit;**

- Carefully follow manufacturer's recommendations and procedures for system charging.
- Never place more than 150lbs or 68kg on platform.
- Center cylinder on platform for maximum accuracy.
- For best results always operate charging meter on a firm and level surface.
- If operating in windy conditions it is best to shield the cylinder to avoid shifting of weight.
- Always use a manifold gauge set in conjunction with this meter to properly monitor system pressures.
- Do not operate the LBS or Kg selection keys while charging or memory will be erased.
- Keep dirt and moisture away from switches, displays and internal components.
- Avoid mechanical shock and temperature extremes.
- Do not expose LCD to direct sunlight for extended periods.
- Connect power cord only to 110-130 VAC (or 220-240 VAC on international versions).
- Do not connect more than 300W or 3A load to the accessory outlet.
- Never use the same unit for charging both R12, and R134a systems. Separate units must be used in order to access the system and prevent cross contamination.
- Do not disconnect hoses while unit is in operating mode.
- Do not leave an open cylinder connected to the INLET PORT when not in use.
- Unplug unit when not in use to prevent voltage spikes.



## OPERATING INSTRUCTIONS

**Getting Started**

Before operating your new charging meter please remove the styrofoam packing blocks located beneath the platform. It will also be necessary to install the batteries (included) as instructed in the maintenance section on page 13.

**Set-Up**

1. Place the meter on a firm, level surface and open lid.
2. Plug the power cord into a 115VAC outlet (220-240VAC for international versions).
3. Carefully place refrigerant cylinder onto the center of the platform, upright for vapor charging.
4. Connect the yellow adapter hose (included) between the cylinder valve and the Inlet Port, located on the outside of the case. Open the cylinder and purge air from the hose if necessary.
5. Switch on the unit by pressing the On key. The unit should "beep" once and all display segments will light for approximately 5 seconds.
6. When th display shows zero choose the unit of measure by pressing either the LBS key, for pounds and ounces, or the Kg key for kilograms and grams. The unit will "beep" and reset whenever the unit of measure is changed.

**CAUTION:** The LBS/Kg keys should only be operated during the "Set-Up" procedure. Attempting to operate while charging, weighing or at any other time will reset the program and erase the memory and display.



## OPERATING INSTRUCTIONS

7. Connect the Outlet Port of the meter to a manifold gauge set, with a supply hose. Make certain that all manifold valves are closed.
8. Connect manifold gauge set to the system as indicated by the manufacturer.

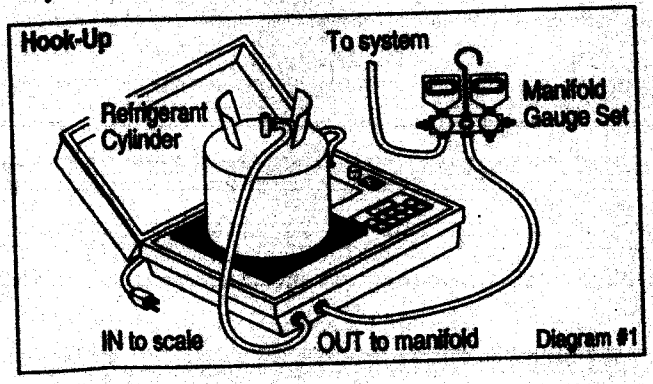


Diagram #1

**Programming**

1. Press the SET key until the LED lights and the unit beeps.
2. Enter the amount to be charged by pressing the ▲ key. To increase the speed, when charging larger amounts, press the FAST key simultaneously. Use the ▼ key for fine tuning if needed. If the ▼ key is pressed while



## OPERATING INSTRUCTIONS

the display reads zero the unit will beep continuously, indicating an improper operation. The display will not change.

3. Press the SET key again until LED goes out and unit beeps. The display should return to zero.

**Charging**

1. Once the programming is complete, press the GO/HOLD key to begin charging: a loud "click" will be heard as the solenoid opens, and refrigerant begins to flow.
2. Slowly open manifold valve(s) to allow refrigerant into system.
3. The display will begin to count up, indicating the weight charged into the system.
4. Follow manufacturer's procedure while charging; it may be necessary to use a heater blanket or to run the system in order to completely charge system.
5. If a heater blanket is used it can be plugged into the fused accessory outlet on the faceplate. This outlet is live only when the unit is plugged in. Maximum load is 300 Watts or 3Amps. If no power is available at the outlet when the unit is plugged in, the fuse is blown. Please refer to the maintenance section for instructions on fuse replacement.
6. When the programmed amount of refrigerant has been dispensed, the solenoid will close and the unit will "beep", indicating completion.

## OPERATING INSTRUCTIONS

7. Upon completion, turn the unit off by pressing the OFF key. Close the cylinder and manifold valves and then disconnect the hoses.

**Charging Hold Feature**

If the refrigerant cylinder empties before the programmed charge is reached it is possible to place the unit into a hold mode, switch cylinders, and resume charging.

1. Press the GO/HOLD key. The solenoid will "click" closed and the unit will begin to "beep" approximately once per second. The display will retain the current reading, indicating how much refrigerant has been charged.
2. Close the empty cylinder valve and disconnect adapter hose.
3. Remove the empty cylinder, replace with a full one and reconnect adapter hose as described in set-up section.
4. Press the GO/HOLD key again. The solenoid will "click" open, the unit will stop "beeping" and resume charging the system.

**Recovery Feature**

The charging meter may also be used to shut-off flow to a cylinder during recovery, allowing for the maximum fill quantity to be controlled. Simply program in the maximum allowable quantity and begin filling cylinder through solenoid.



## OPERATING INSTRUCTIONS

**Weight Measurements**

The charging meter may be used strictly as a weigh scale. For example, to determine the remaining refrigerant in a cylinder and/or the tare weight of a cylinder. Maximum weight is 150lbs or 68kg.

1. Switch on the unit by pressing the ON key.
2. Select the desired unit of measure; either LBS or Kg on the programming keypad.
3. Press the ZERO key until the display reads zero.
4. Carefully place the object to be weighed directly onto the center of the platform.
5. Weight will be displayed. If the unit is displaying pounds and ounces and an object in excess of 100lbs is placed onto the platform, the display will show an overrange ("o_ _ _"). If this occurs it will be necessary to switch the unit of measure to kilograms and then to convert back to pounds as described below;
   a. Remove object from platform.
   b. Press the Kg key.
   c. Zero the display again, as described in step 3, above.
   d. Replace object onto platform.
   e. Weight will be displayed in kilograms and grams. To convert to pounds and ounces please refer to the conversion chart supplied with your charging meter.
6. When weighing is complete, switch the unit off by pressing the OFF key.



## UNIT MAINTENANCE

As with all electronic instruments, maintenance on your Charging Meter is minimal. Keep the instrument clean and dry and avoid exposure to very hot and/or humid conditions.

**Fuse Replacement**

If the accessory outlet is not live when the unit is plugged in the most likely cause is a blown fuse.

1. Remove fuse by pushing down and rotating 1/4 turn.
2. If the fuse appears to have blown, replace by pulling fuse from the holder cap and replace with a 250v 3A fast blow glass fuse, part # TIF9051.
3. Place fuse into fuse compartment by lining up notch, pushing down and rotating 1/4 turn. See diagram #2.

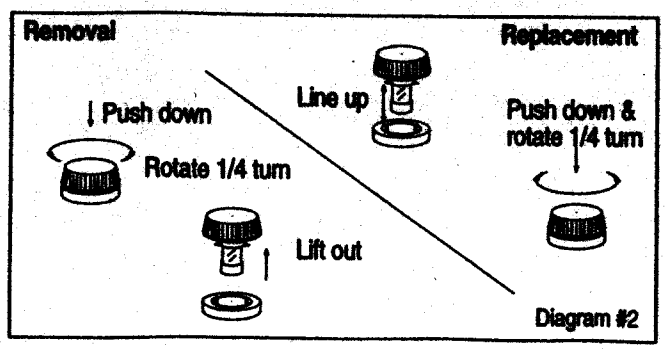



Diagram #2



## UNIT MAINTENANCE

**Battery Installation/Replacement**

When battery voltage becomes insufficient the LCD characters will begin to flash on and off. When this occurs you have approximately 20 minutes before low voltage affects operation. Do not engage in any new operations before replacing the batteries.

1. Remove the battery cover by gently pulling up on the two plastic pegs and lifting away as illustrated in diagram # 3.

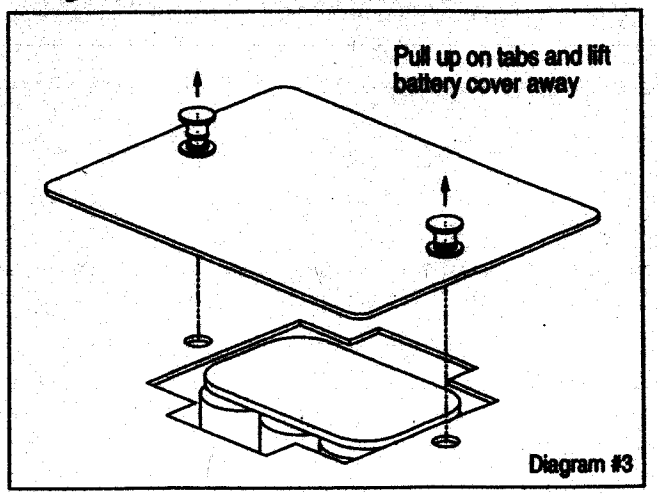



Diagram #3

## UNIT MAINTENANCE

2. Remove the battery pack by lifting up and out of case and unplug as shown in diagram # 4.
3. Remove the old batteries and replace with six (6) new and/or tested "AA" (1.5v) alkaline batteries. Please be carefull to note the polarity indications marked on the battery holder.
4. Reconnect the batter holder, place it back into the battery compartment and replace the cover by gently pushing down on the two plastic pegs.

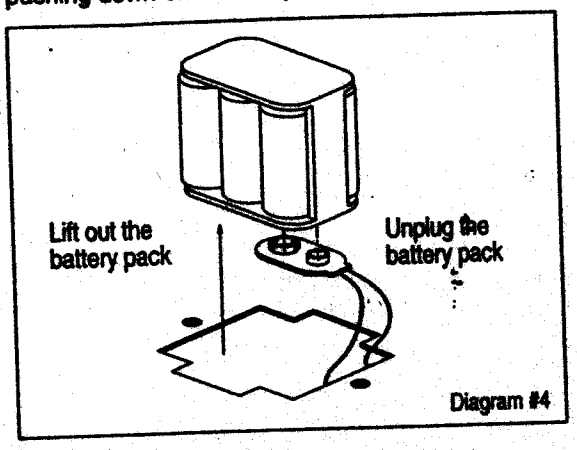



Diagram #4



## SPECIFICATIONS

**Maximum Weight:** 150lbs or 68kgs
**Maximum Display:** 99lb 15.5oz or 99.99kg
**Resolution:** 1/2 ounce or .01 kilograms
**Accuracy:** +/- 2% of reading or 1/2 oz, whichever is greater
**Charge Program:** 100lbs or 68kg (max) in 1/2oz or .01kg increments
**Power Supply:** Six AA batteries, 115VAC 60HZ (230V 50Hz for international versions)
**Battery Life:** 70 hours (alkaline)
**Accessory Outlet Rating:** 300W (3Amps for Int'l) max
**Operating Conditions:** 32 to 120°F
**Weight:** 10.75 lbs
**Dimmensions:** 16" x 13" x 5"

**Replacement Parts**

| Part Description | Part # |
|---|---|
| Adapter Hose | 9536CH (ACS9050); 4536ACH (ACTR9150) |
| Replacement Fuses (pack of 6) | 9051 (BOTH MODELS) |



## WARRANTY & REPAIR

**Limited Warranty and Repair/Exchange Policy**

This instrument has been designed and manufactured to provide unlimited service. Should the unit be inoperative, after performing the recommended maintenance, a no-charge repair or replacement will be made to the original purchaser within one year from the date of purchase. This warranty applies to all repairable instruments that have not been tampered with or damaged through improper use.

This warranty does not cover batteries, fuses, or any other materials that wear out during normal operation of the instrument.

**Returning Your Unit For Repair**

Before returning your instrument for repair please make sure that you have carefully reviewed the Unit Maintenance section of this manual to determine if the problem can be easily repaired. Make sure that the batteries and/or fuse are working properly **BEFORE returning the unit.**

If the unit still fails to work properly contact your dealer for return instructions.Repaired or replaced tools will carry an additional 90 day warranty. For more information please call (800) 327-5060.