

PATCO

The Model 7200 Intelitender is designed to support lead acid batteries in the range from 10 to 100 Amp Hours of capacity, with nominal voltages from 6 to 12 Volts. The Model 7200 has a power envelope available at the battery during charging of 80 watts, and comes configured for a nominal C/10 charge rate. The Model 7200 has the following basic operational characteristic.

1. **Bulk Charge Mode** - Used when the battery has been discharged. This mode replaces 80% of the charge to the battery.
2. **Absorption Mode** - A tapering current, replacing the final 20% of the charge to the battery.
3. **Float Mode** - This mode maintains the battery's electrolyte at the ideal specific gravity regardless of the temperature of the battery. This weatherproofs the battery, eliminating freezing and boil-off. It also prevents plate oxidation and sulfation.

The following graphs illustrate how these functions are accomplished. The Model 7200 is charging an 33 amp hour battery from full discharge to float state. The first curve, **Fig 1**, shows the current supplied to the battery during a typical charge cycle for the Model 7200 as it brings the battery from full discharge to full charge. The second curve, **Fig 2**, shows the voltage measured at the battery's terminals.

During the first minutes of the charge cycle, the Model 7200 supplies to the battery a current of approximately 400 ma. Provided the polarity of the battery is proper, and the measured voltage is between 10 and 14 volts, charging begins in the area named "Bulk Charge". As the battery approaches 80% of its capacity, the Model 7200 changes to a constant voltage source, and the current begins to taper during the

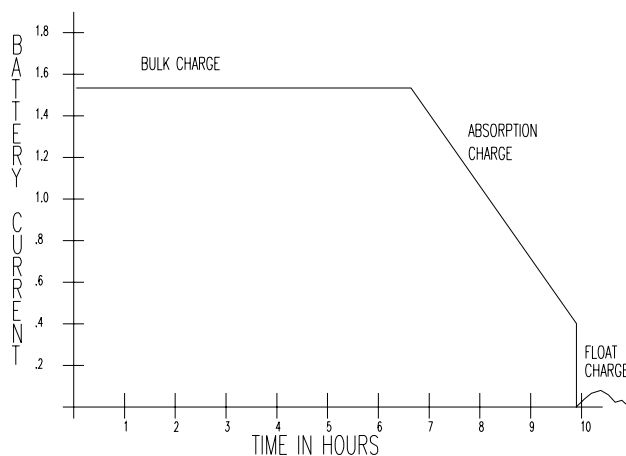


Figure 1

MODEL 7200



phase of charging that would generate increased amounts of gas if the constant current were still applied. Once the current reaches a preprogrammed value, compensated for temperature, the Model 7200 changes to its final mode of operation, that of a float charger.

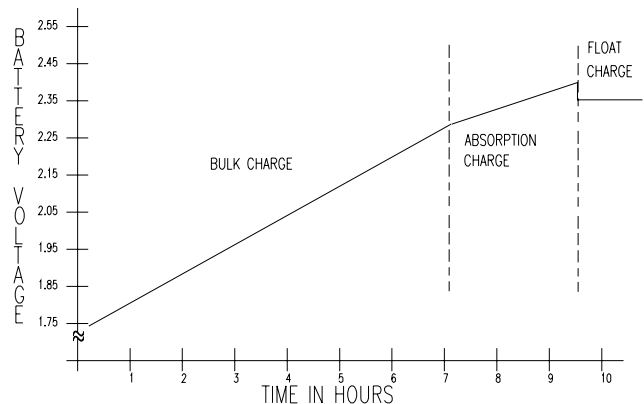


Figure 2

The management of current flowing to the battery during this process is critical if the process of energy storage is to be optimized. Once the charge stored reaches 80%, gas produced by charging increases. During Absorption Mode, the current tapers, generating a slower increase in voltage for the same time interval. Finally, when the battery is fully charged, the current ceases for a short time and the voltage falls to the Float Voltage. These critical break points, ending Bulk Charge, ending Absorption Charge, and the transition to Float Voltage are all temperature compensated, permitting precise programming of these voltages, hence the maximum charge stored.

Two LED's provide a status report to the user of the charger's operations. Initially, with no battery present, no lights are on. When a battery is detected, provided the battery's voltage is less than 12 volts and greater than 10 volts, the Red light comes on, meaning charging is taking place. When the charger has entered the Float State, the Green light will come on. The Red light will illumine if the Battery voltage is less than 10 volts, although only a bias current will be supplied until the battery's terminal voltage rises above 10 volts. If the battery is connected with its polarity reversed, the Red light will flash.

SPECIFICATIONS

The Model 7200 is ideal for charging batteries of 100 amp hour capacity or less, with a power envelope of 80 watts to the battery, and a maximum current out of 5 amps. The instrument can be programmed from 200 milliamps to 5 amps, from 6 volts to 24 volts.

	Model PC-7200
Current Limit	5 Amps
Voltage Limit	6-12 Volts
Terminate wait time	3 seconds
AC Voltage In	95-265
Frequency In	50/60 Hz
Max Power In	120 Watts

ORDERING INFORMATION

The Model PC-7200 can be configured when ordering using the following information:

7200-N/M

Where N is the nominal battery voltage and M is the initial charge current in amperes.

Size:

8" Long, 5.6" Wide, 3" High

Construction:

Aluminum

Weight:

3.5 lbs., 1.6 Kg

Operating Temperature:

0 to +50 Degrees C

PATCO ELECTRONICS, INC.
1855 SHEPARD DRIVE / TITUSVILLE, FL 32780
PHONE [321] 268-0205 FAX [321] 264-4253
www.patcoelectronics.com