

The *INTELI TENDER 300* provides two fully independent battery chargers, each having the same basic characteristics described below. Each output is fully floating, so that it can be connected to the appropriate batteries in any configuration. Each output is reverse polarity protected and current limited, so that neither the Model 300 nor the batteries can be damaged. The Model 300 can simultaneously support two different batteries. It will behave normally with both outputs connected to the same battery. If more rapid charging is needed than one output of the Model 300 can supply, both outputs can be connected to the same battery without adverse effects to the batteries or the Model 300. Each output has three modes of operation:

1. Bulk Charge Mode - Used when the battery has been discharged. This mode replaces 80% of the charge.
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 two graphs illustrate how these functions are accomplished. The Model 300 actually becomes three unique instruments, depending on the charge stored and the temperature of the battery. The first curve, **Fig. 1**, shows the current from the Model 300 as it brings a 50 Amp Hour battery from full discharge to full charge. The second curve, **Fig. 2**, shows the voltage measured at the battery's terminals. For the typical Bass rig, two batteries in the range from 50 to 100 Amp Hours are used, usually in series (+ lead of one battery connected to the - terminal of the next battery.) Because the Model 300 has fully floating outputs, it does not matter which output is connected to which battery. For each battery, the percent of charge is given in the graph labeled Figure 2.

During the first thirty six hours of the charge cycle, the Model 300 supplies the battery a constant current of 1.5 Amperes. As the battery reaches 80% of its capacity, the Model 300 changes to a constant voltage source, providing a tapering current during the stage of charging that would be generating increasing amounts of gas if the constant current were still applied. Once the current to the battery reaches a pre-programmed value, compensated for temperature, the Model 300 changes to its final mode of operation, that of a float charger.

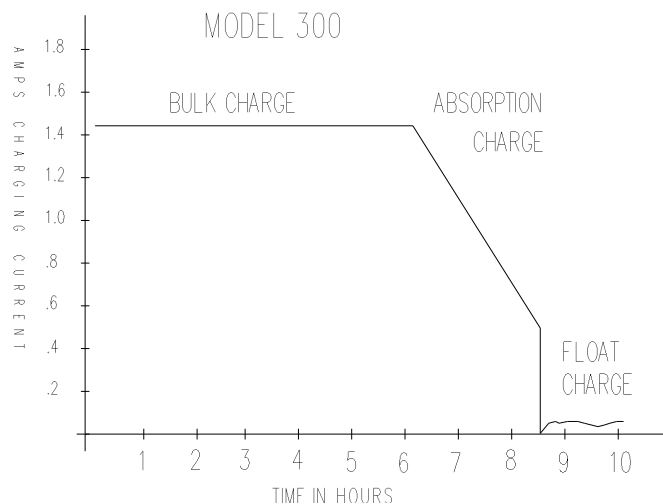
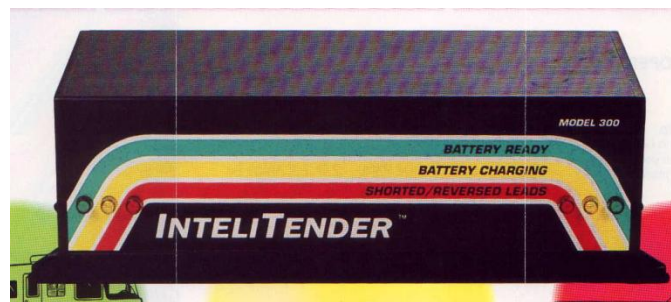


FIGURE 1

The management of the current flowing to the battery during this process is critical if the process of energy storage is to be optimized. During the 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 brief time and the voltage falls to the Float Voltage. These critical break points, ending Bulk Charge, ending Absorption Charge, and Float Voltage are all temperature compensated, permitting precise programming of these voltages, hence maximum charge stored.

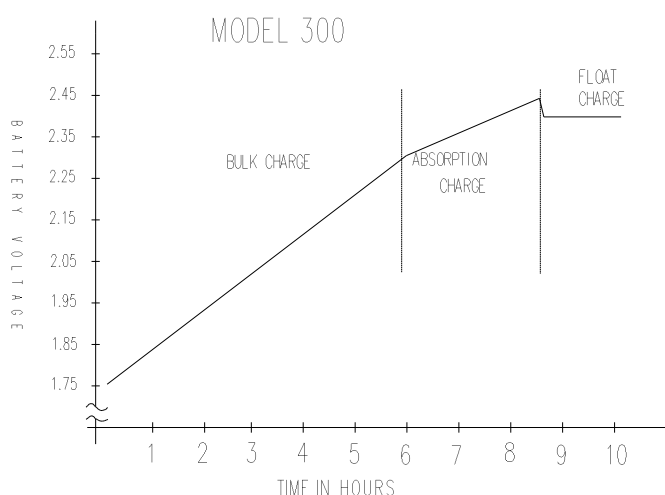


FIGURE 2

The *IntelliTender* Model 300 is suitable for both charging and tending batteries of 100 Amp Hour capacity and less. The instrument is available in 6 and 12 volt versions. When larger batteries are involved, the charging time increases, but the ability to Tend or maintain is undiminished through 100 Amp Hours. The *IntelliTender* 300 is designed primarily for use in either recharging smaller batteries in the range of 25 Amp Hours, or charging and Tending batteries used intermittantly up to 100 Amp Hours. If a larger batteries must be recharged quickly, the Model 520 or Model 1200 may be used. To determine which charger is best suited to recharge a given battery, divide the Amp-Hour capacity of the battery to be recharged by 10, and choose the instrument whose Bulk Charge current is closest to that number. **Figure 3** permits the user to determine the approximate recharge time for a battery that has given up 70% of its rated capacity. This discharge exceeds most manufacturers recommendations, where maximum discharge is limited to 60% of rated capacity.

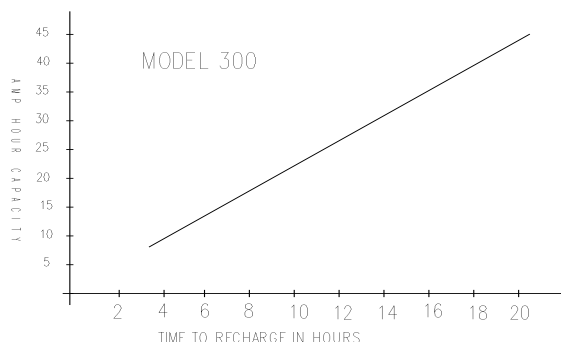


FIGURE 3

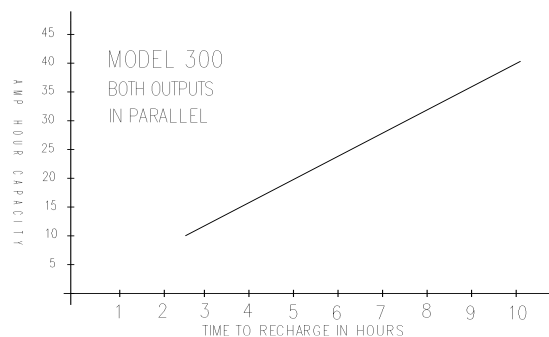


FIGURE 4

Specifications

	Model 300-6	Model 300-6/750	Model 300-12	Model 300-12/750
Bulk Charge Current	1.5 Amps	.75 Amps	1.5 Amps	.75 Amps
Bulk Charge Voltage Range	5 - 7 Volts	5 - 7 Volts	10 - 14 Volts	10 - 14 Volts
Absorption Mode Current	1.4 - .5 Amps	.70 - .25 Amps	1.4 - .5 Amps	.70 - .25 Amps
Absorption Mode Voltage Range	7 -7.25 Volts	7 -7.25 Volts	14 -14.5 Volts	14 -14.5 Volts
Float Voltage	6.9 Volts	6.9 Volts	13.8 Volts	13.8 Volts
DC Voltage In	11-30 VDC	11-30 VDC	11-30 VDC	11-30 VDC
AC Voltage In	220 VAC	220 VAC	220 VAC	220 VAC
Frequency In	60 Hz	60 Hz	60 Hz	60 Hz
Power In	30 Watts	20 Watts	50 Watts	30 Watts

Size:

7" Long, 2.5" High, 3.5" Deep

Mounting:

4 ea #6 screws, 7.75" x 2.75"

Weight:

4.2 lbs., 1.9 Kg

Construction:

Aluminum body

Finish:

Electrolytic Hardcoat

Operating Temperature:

0-50 Degrees C
Optional, -40 - 50 Degrees C

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