

SUBJECT: 24 VDC 20 AMP SPE BATTERY CHARGER (1097215-0)

AC Input

The charger has a pigtail with an IEC C14 connector that is rated at 85-264 VAC 50-60 Hz. This allows the user to plug the charger into off-board power by using any standard IEC C13 cable. Webb provides this charger with an IEC C13 / Type B (NEMA 5-15 North American 3-pin 125VAC) only.

24 VDC Output

The charger has a gray SB-50 Anderson style connector cable which matches Webb's products rated for 15 amp/20 amp 24VDC input.

Before using, the user must set the charger for the type/size of batteries being charged.

To 'Set' the Charger

Using a small flat blade screwdriver, remove the plug indicated below:



Through this hole you will be able to see and set the DIP switches according to the chart below:

SmartCart Battery Type	SW1		SW2	
	1	2	1*	2**
AGM 105AH: 8A31DT	OFF	OFF	OFF	OFF
AGM 55AH: 8A22NFM	OFF	OFF	ON	OFF
TPPL: XE-95 or 12NXS89	OFF	ON	OFF	OFF
Wet: S2000 or DC31	ON	OFF	OFF	OFF

* Off = 20 amp, On = 15 amp

** Off = 24VDC, On = 12VDC

Charging: Sequence of Events When Power is Applied

The charger has 4 phases of charging:

1. Constant Current (Constant Red LED) – batteries below ~80% full. Max current, voltage climbs during charge process.
2. Constant Voltage (Constant Red LED) – batteries from ~80% and ~98% full. Current drops during charge process.
3. Finish Charge (Constant Yellow LED) – batteries from ~98% and ~100%. Voltage is again raised while amps are kept low. Process is stopped when battery reaches max voltage or time limit expires.
4. Maintenance Mode (Constant Green LED) – fully charged. Charger maintains batteries indefinitely with a constant voltage while amps drop to almost zero.

Note:

1. AGM batteries smaller than 90 AH should use 15 amp setting.
2. AGM batteries smaller than 45 AH should not use this charger.
3. This charger is not for use with battery packs larger than 235 AH.

For Curtis Charger Users:

Previous users of 20 amp Curtis chargers: this charger can be set up to work with whatever batteries you have.

Previous users of 8 amp Curtis chargers: you may elect to switch to the SPE charger and use at 20 amp rate based on batteries mentioned in table above.

System Concerns for Former On-Board Charger Users:

If you are using this charger in your everyday system operation to manually charge your vehicles overnight, please note the following rules as the SPE 20-amp charger charges at a slower rate than the On-Board 25-amp charger.

Two-Battery Vehicles (Model 50 and 100) – if you are running your system 17 hours or less per day you can switch to this new charger without any worries.

Four-Battery Vehicles (Model 200 and 300) – if you are running your system 13 hours or less per day you can switch to this charger without any worries.

If you fall outside of either of the rules above, contact your SmartCart Sales Engineer prior to switching charger models. Or you may elect to stay with your existing 25 amp charger. For this reason, Webb still offers the On-Board charger for sale, but the On-Board charger is more expensive and may take longer to acquire.