Car Battery Charger

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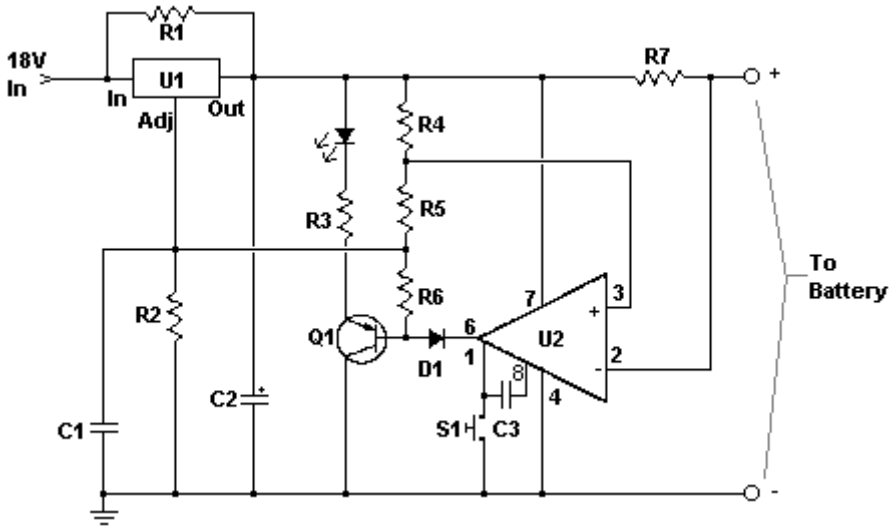
This charger will quickly and easily charge most any lead acid battery. The charger delivers full current until the current drawn by the battery falls to 150 mA. At this time, a lower voltage is applied to finish off and keep from over charging. When the battery is fully charged, the circuit switches off and lights a LED, telling you that the cycle has finished.

Schematic



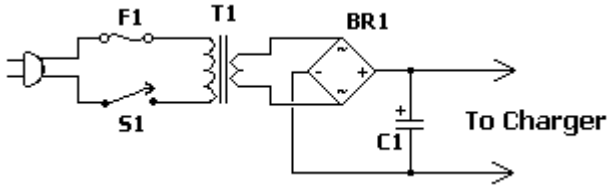
Parts

Part	Total Qty.	Description	Substitutions
R1	1	500 Ohm 1/4 W Resistor	
R2	1	3K 1/4 W Resistor	
R3	1	1K 1/4 W Resistor	
R4	1	15 Ohm 1/4 W Resistor	
R5	1	230 Ohm 1/4 W Resistor	
R6	1	15K 1/4 W Resistor	
R7	1	0.2 Ohm 10 W Resistor	
C1	1	0.1uF 25V Ceramic Capacitor	
C2	1	1uF 25V Electrolytic Capacitor	

C3	1	1000pF 25V Ceramic Capacitor
D1	1	1N457 Diode
Q1	1	2N2905 PNP Transistor
U1	1	LM350 Regulator
U2	1	LM301A Op Amp
S1	1	Normally Open Push Button Switch
MISC	1	Wire, Board, Heatsink For U1, Case, Binding Posts or Alligator Clips For Output

Notes

1. The circuit was meant to be powered by a power supply, which is why there is no transformer, rectifier, or filter capacitors on the schematic. There is no reason why you cannot add these.
2. A heatsink will be needed for U1.
3. To use the circuit, hook it up to a power supply/plug it in. Then, connect the battery to be charged to the output terminals. All you have to do now is push S1 (the "Start" switch), and wait for the circuit to finish.
4. If you want to use the charger without having to provide an external power supply, use the following circuit.



Part	Total Qty.	Description	Substitutions
C1	1	6800uF 25V Electrolytic Capcitor	
T1	1	3A 15V Transformer	
BR1	1	5A 50V Bridge Rectifier	10A 50V Bridge Rectifier
S1	1	5A SPST Switch	
F1	1	4A 250V Fuse	

5. The first time you use the circuit, you should check up on it every once and a while to make sure that it is working properly and the battery is not being over charged.

Related Circuits

6V to 12V Converter, **Portable CD Player Adapter For Car**, Car Battery Charger, **Automatic 12V Lead Acid Battery Charger**, **Solid State Tesla Coil/High Voltage Generator**, **12VDC To 120VAC Inverter**, **LASER Power Supply**, **Power Supply**, **High Current Power Supply**, **Dual**

Polarity Power Supply, **High Voltage High Current Power Supply**, **Transformerless Power Supply**, **Fixed Voltage Power Supply**, **Voltage Inverter**, **Voltage Inverter II**

Comments

Collins Car Battery Charger Tuesday, July 24, 2007 8:21:16 AM

Please, How can I use this Charger on a 120A Dry Cell Battery? Need full schematic diagram and modifications.

James Car Battery Charger Sunday, July 22, 2007 3:52:31 AM

Brilliant. one press and away it goes. everyone is asking stupid questions..... Why would you want to use it to run an inverter (12v to 120v) If you were using this charger off 120v you wont need to. and if you were using a battery to charge a battery (Dumb) you would just connect the inverter to the battery---FORGET THE CHARGER

saheed My question is Friday, July 20, 2007 11:08:13 PM

The Ampere-Hour-Rating of the battery charger, and also how to calculate the rating of the power.Its a nice project and i will like to used it as my own project.Can u pls send me the solution to my question.

Waleed Car Battery Charger Tuesday, July 17, 2007 4:09:52 AM

hey ; can i use this circuit to charge 6 V motorcycle battery ? and thanks for help :)

Mohamed there is a question Saturday, July 14, 2007 8:06:43 AM

can i use this circuit to charge a 6v battery used in motorcycles? and thanks for your help please if my question has any answer, send this answer for me

andrey Car Battery Charger Saturday, July 14, 2007 4:18:55 AM

can this circuit to charge the AA NiCd/NiMh,and how to make this circuit has a display to know if the battery has been full..please give me answer

(Editor's notes: No.)

Qazi Muhammad Imran Car Battery Charger Friday, July 13, 2007 8:36:25 PM

This circuit isvery halpfull...

john raul cormina Car Battery Charger Wednesday, July 11, 2007 7:48:51 PM

is this circuit can charge a 12 flets car battery?

anonymous Car Battery Charger Tuesday, July 10, 2007 12:46:14 AM

how should a pair of underage naive teenagers go about charging a car battery with no experience without a second car BUT we do on the other hand, have access to a car battery charger?

bright Car Battery Charger Saturday, July 07, 2007 4:12:20 PM

please can i use this charger for 12V TO 120V INVERTER,i will not use it in a car

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