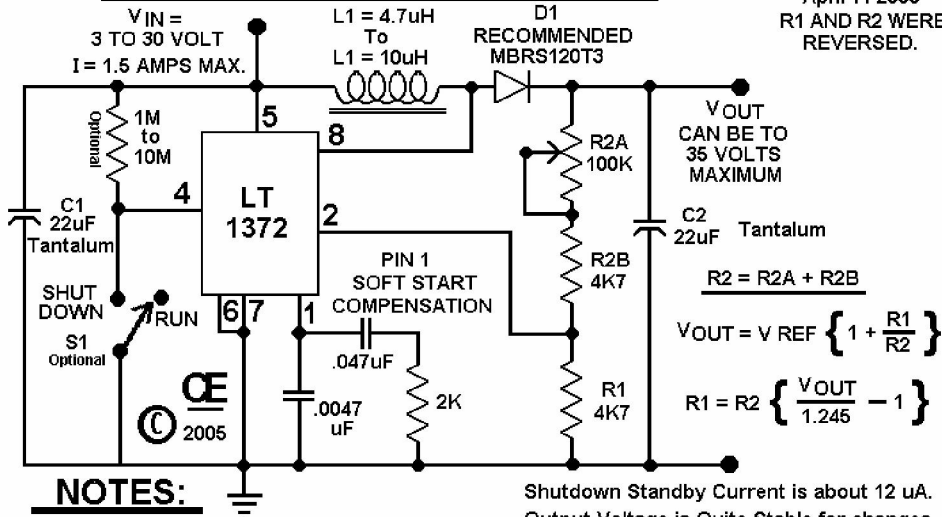


POSITIVE VOLTAGE BOOST

Corrected
April 11 2005
R1 AND R2 WERE
REVERSED.



NOTES:

Efficiency, Typically 80 to 90%
D1, I USE A 1N4937 FOR MOST APPLICATIONS.
WITH R1 AND R2 AS SHOWN, THE OUTPUT IS
ADJUSTABLE FROM VIN TO ABOUT 31.5 VOLTS.

Shutdown Standby Current is about 12 uA.
Output Voltage is Quite Stable for changes
in the Input Voltage.
L1 Must be able to handle the Maximum
Current, Without Saturation.
If L1 = 4.7uH, Operation is at 500KHz.
If L1 = 10uH, Operation is at 1MHz.

The Circuit is Extremely Simple and is Useful for many Applications. Definately A Good Circuit for charging one battery from another.
But this application Requires a Additional Blocking Diode to prevent the Battery from Discharging through R1 and R2.

Both 22 uF Caps MUST BE Solid Tantalum Types, For Efficient Operation..

The Typical Circuit Efficiency is between 80% to 90%.

"L1": Needs to be able to handle the Maximum Current.

A Typical "Hash Filter" Type Choke of the correct Inductance, Usually works Quite Well.

Be aware the Output voltage is Always Greater than the Input Voltage. It Cannot Be Adjusted Lower than that. Typical Design Applications:

Considering the Maximum Input Current is 1.5 amps, and assuming 80% Efficiency.

- 1) If you want to boost 6 volts. the Output Current at the 12 Volts will be about 600 mA.
- 2) If you are Charging one battery from another and only need to Boost the 12 volts to 14 volts. Than you should get out about 1 Amp at the 14 volts.

