

# **Inverter step-down to 48V**





## Overview

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What is a 24v-48v step down converter?

This 24V-48V step down converter is the perfect solution for reducing voltages on marine systems, golf carts or anything running 24, 36 or 48 volts where you also need to power 12 volt accessories off the same battery. Waterproof for installation in marine applications. Compact and easy to wire.

Should a step-down converter be isolated or nonisolated?

Key applications manufacturers are replacing complex, expensive isolated 48 V/54 V step-down converters with more efficient, nonisolated, high density step-down regulators (Figure 1). Isolation is not necessary in the regulators' bus converter since the upstream 48 V or 54 V input is already isolated from hazardous ac mains. Figure 1.

Can a 48V inverter be rated at 2 kVA?

In this post I have explained a simple 48V inverter circuit which may be rated at as high as 2 KVA. The entire design is configured around a single IC 4047 and a few power transistors. I am a big fan of u.i am a wisp. i need an inverter design with 48volt DC input and 230volt output supply and output power in the range up to 500w.

What is a synchronous step-down converter?

The prevalent power stage topology in this application is the non-isolated synchronous step-down converter. Synchronous switches facilitate bidirectional current flow to allow boost mode.



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### [Simple 48V Inverter Circuit](#)

Circuit Description  
Setting Up The Oscillator  
Frequency  
Using Zener Diode to Drop Regulate  
The IC Supply Voltage  
In the above explained 48V inverter circuit I have used a BC546 emitter-follower series pass circuit to step down the 48V DC to 9V DC for supplying the IC 4047. However, if the BC546 transistor is not available, we can incorporate a zener/resistor based regulator for achieving the same results, as shown in the following diagram:  
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### **Voltage Converters & Power Inverters , RS**

Some DC-DC converters will step up the power, others will step down and some can do either. It's important to know the specifications of the ...

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