



Shortwave base station power supply circuit



Overview

This document describes the design, simulation, construction and characterisation of a versatile 3-channel general-purpose benchtop linear power supply. Linear PSU's can be fixed, for example, as a 5-V supply that you might need for a logic circuit, or several fixed supplies needed for a PC (+5, +12, or -12V). On a bench lab-type PSU, you would want to use a variable PSU. The consequences of regeneration of the regenerative TRF receivers are the radiation and unwanted coupling of the antenna and the L-C. A broadband 100W linear RF power amplifier covering LF, MF and HF radio bands was created by modifying the 1W in, 100W out, 1.8 to 54MHz amplifier designed by Jim Veatch, WA2EJ, Appendix 1, that utilizes NXP's LDMOS MRF-101A transistor made for RF power applications. NOTE: There is no instruction on how to build any of this stuff. You must use your own wits (or just Google it!). Figure 103 : Random Circuit. Although there is a tendency for short wave listeners and Radio Amateurs to use ready made equipment these days, greater satisfaction and enjoyment can be gained from the hobby by using home constructed equipment. Modern FPGAs and processors are built using advanced nanometer processes because they often perform calculations at fast speeds using low voltages ($<0.9\text{ V}$) at high current from compact.



Article Content

100WBroadbandLF+MF+HF_RF_Amplifier-R28Jan21

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Power Supply Solutions for Wireless Base Stations Applications

Power supplies can be employed in each of the three systems that compose wireless base stations. These three systems are known as the environmental monitoring system, the data communication ...

Short Wave Radio Circuit

To minimize the pulling, a bipolar transistor and a FET connected in series are added to the RF stage of the circuit as shown in figure. It can be ...

radioSPARKS

NOTE: There is no instruction on how to build any of this stuff. You must use your own wits (or just Google it!). Figure 103 : Random Circuit Diagram.

Shortwave base station linear power supply circuit

A general-purpose benchtop power supply must have two supplies at a minimum to allow for the powering of split-rail analog circuits. The addition of a third, lower voltage supply is useful for ...

So You Want to Be a Shortwave Pirate

The following schematic shows the three stages of our circuit. Â If you came across this article without reading my previous posts, and think this circuit looks difficult ...

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Selecting the Right Supplies for Powering 5G Base Stations ...

These tools simplify the task of selecting the right power management solutions for these devices and, thereby, provide an optimal power solution for 5G base stations components.

How to Build Advanced Short Wave Receivers

The circuit diagram of the B.F.O. appears in Figure 5, and this is a simple Colpitts circuit. Tr3 is used as a common base amplifier and positive feedback is provided between its collector and emitter by way ...

The Best Ham Radio Power Supply (Linear and Switching)

Bottom Line: In sum, this compact ham radio power supply has protection against overheating, overloading, and short circuits while generating clean power that ...

Contact Us

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