

VCO-POS

Function

The device is a RF source based on the Minicircuit's POS range of voltage controlled oscillators. The output is a fixed amplitude radio frequency signal with frequency tunability over the range specified by the POS VCO.

Performance



Date

Project date: May 2011

Developer

Hrishikesh Kelkar, kelkar@iqo.uni-hannover.de

User

This VCO (qty:2) is currently being used in the Magnesium experiment.

Operating principle

The circuit is based on a Minicircuits POS VCO. A stabilized voltage is provided to the POS oscillator, which creates a RF output for EOMs or AOMs. A wide range of RF frequencies can be produced by simply choosing the POS oscillator of desired frequency.

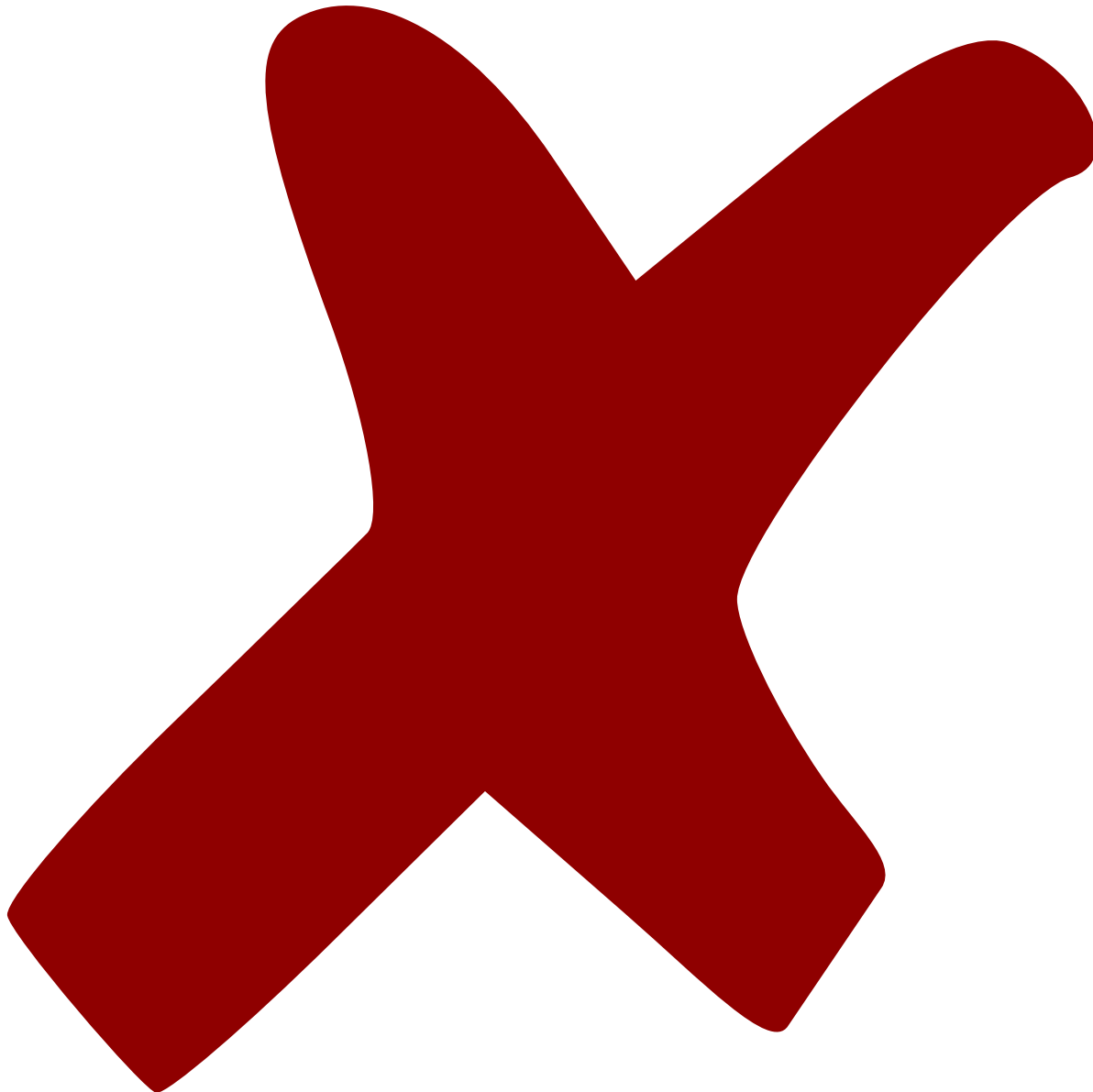
Circuit diagram

- The [Schematic](#) in PDF-Format
- The source files can be obtained from the [Download-page](#) of the wiki. (Direkt-Link: [Schematic](#), [Board](#))

What	How many	E-Preis (€)	Preis (€)	Note
PCB	1x	4	4	60 boards for 240 € from Basista
Housing	1x	??.??	??.??	
POS-x	1x	60	60	...
R,C	5x	0.02	0.10	
Diode	2x	0.05	0.10	
Voltage reference	1x	0.50	0.50	
		Sum	64.70 €	

Meckerliste

Was für die nächste Version zu tun ist: (



: verworfen,



: in Arbeit,



Schaltplan, aber noch nicht im Layout,

: im



: erledigt)



1. Different voltage reference than 12 V, since you aren't able to tune the full range with only 12 V. Solution: Use 78L15 as reference.
2. Add a better voltage reference like REF02 or similar which is way more stable than 7815 so you get less frequency drifts.

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