

dBm festival docs 2025, 2026

20. - 24. May 2026 @ Kulturgüter-Schuppen, Bahnhofstr.16 D-72144 Dusslingen

dbm

1) dBm (deciBel-milliwatts) is a unit of power [level](#) expressed using a logarithmic decibel (dB) scale respective to 1 mW.

this is not what we are talking about here :-)

2) acronym for "dead Battery music". dBm occurs when electronic circuits that generate audio signals, not necessarily musical instruments in the narrower sense, have their power supply reduced to such an extent that they generate artifacts or even completely different signals than in normal operation. This process is also known as "power starving". Oscillator circuits with CMOS logic gates have proven to be particularly suitable.

dBm 2026 is a DIY workshop festival for advanced ^{*)} music electronic tinkerers where we will investigate the sonic limits of CMOS logic gate circuits. We want to delve deep into theory and practice and systematically develop, measure and optimize dBm circuits, so that at the end of the workshop the participants can take home a new dBm synth, or at least many ideas.

The workshop will take place near Tübingen, more precisely, 7km away in Dusslingen, right next to the train station in the [Kulturgüter-Schuppen](#). There is an electronics workshop with lots of, mostly free, material, as well as a laser cutter and other tools.

Accommodation will be in the local [YMCA house](#), which is 15min walking distance. We can also use the [kitchen](#) there in the evening for self-catering.

Drinks, fruit and something to nibble on will of course also be available during the day in the KulturgüterSchuppen. We plan a public concert on Saturday evening (23.May) at the end of the event, where we will present our "research results".

The costs for 4 overnight stays will be around 100€ per person. Cost of care depends on how often we want to cook ourselves.

I will be able to give more details when the list of participants is complete.

If you would like to take part, please send a short description of what you do and what you would like to contribute technically and musically.

Register as early as possible by email to kulturgueterschuppenÄTgooglemailDOTcom, as places are limited.

Note: Everything we develop together (schematics, hardware) is subject to the CC NC BY SA license. We develop for the DIY community!

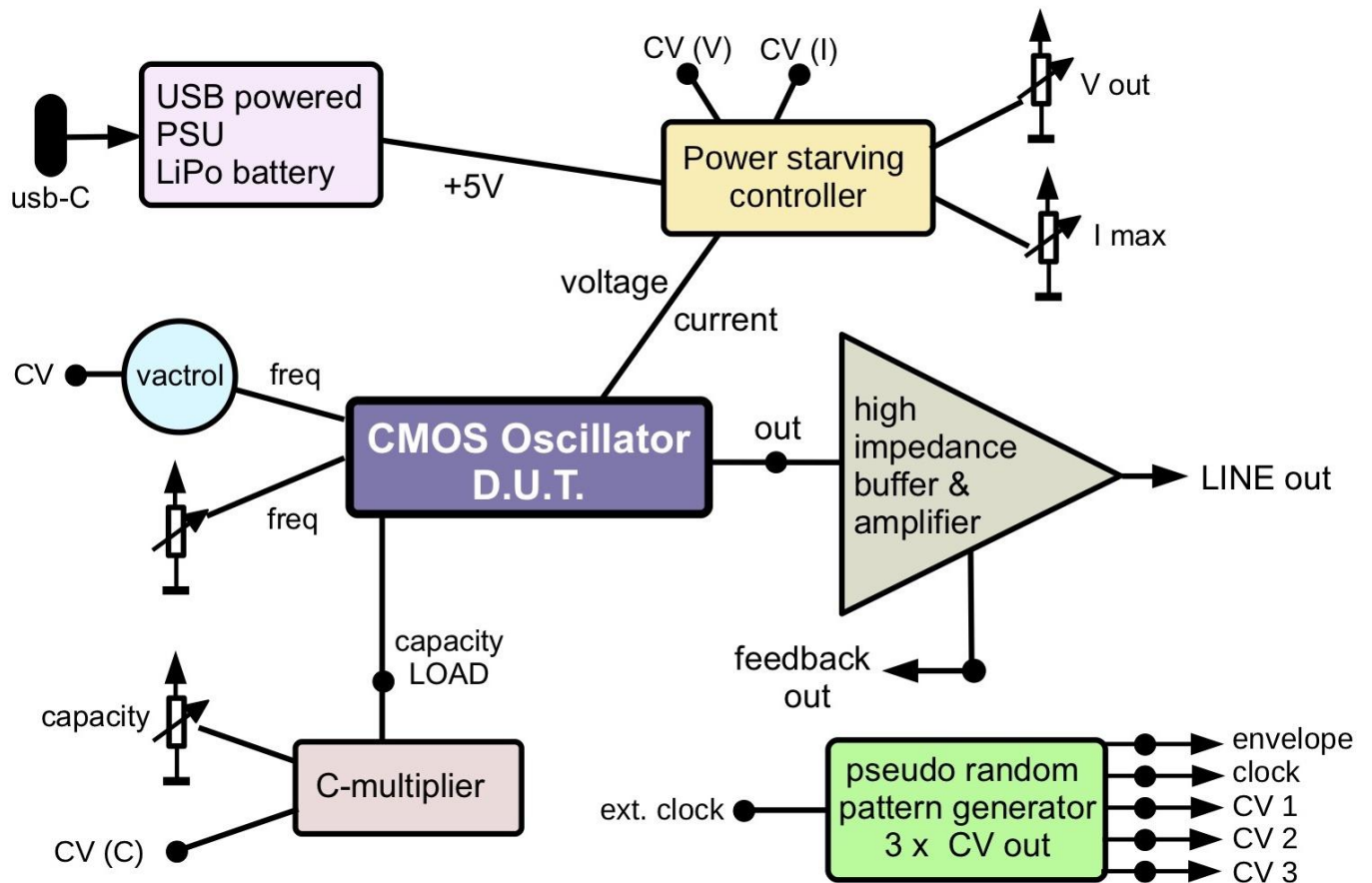
*) : advanced means: you can read a circuit diagram and put it on a breadboard, solder it on a breadboard or assemble a PCB without outside help.

building test hardware (dBm 2025)

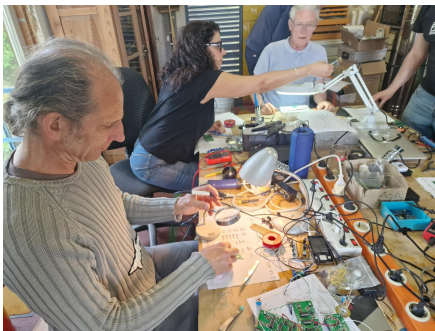
our dBm research system consists of these modules :

- Power supply : USB powered, LiPo battery, 5V out
- Power starving controller : voltage and current control with potentiometers & CV inputs
- CMOS oscillator (D.U.T.) : various topologies of Schmitt-Trigger based squarewave oscillators
- High impedance buffer & amplifiers: line and feedback outputs Potentiometers for gain and feedback
- C-multiplier: electronically variable capacitance with potentiometer and CV control. Acts as capacitive load for D.U.T.
- triple CV out pseudo random pattern generator : for controlling CVs of power starving controller and C-multipliers
- vactrol module : DIY dual vactrol with exponential CV control for potentiometer replacement in D.U.T.

overview experimental dBm setup



dBm impressions 2025,2026



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