

Marconi Synthesizer



TODO: Welcher typ synthesizer ist noch im Raum? und welcher typ mit den jeweiligen Einstellungen eintragen

Marconi Synthesizer 2024



- Manual 2024:
ifr_2024_datasheet.pdf
- possible settings: Frequenzbereich von 9 kHz bis 2,4 GHz, Auflösung 1 Hz, Ausgangspegel von -140 bis +13 dBm, Auflösung 0,1 dB, interne 2-Ton-Modulationsquelle für Sinus, Rechteck und Dreieck, lineare und logarithmische Wobblung, AM, FM, pM, Puls und FSK, Rückleistungsschutz bis 50 W, LC-Display, numerische Tastatur, GPIB und RS-232

Options

- 01 No attenuator
- 03 high Power
- 04 high stability frequency standard
- 11 Fast pulse and high power



- **Error message:** "External reference is missing!!!"
- **Important:** External(Ext): <fc #4682b4>1 Ext 10MHz direct</fc>

(MENÜ)-Button → Frequency/Sweep (Select) → 4 Frequency standard (Select) → 1 Ext 10MHz direct

- **Possible errors:** no Rb-referenz/ GPS/ OXCO connection or wires connected?



- **Normal state (10MHz):**

Synthesizer is broken?

Manual for repair: <http://www.ko4bb.com/getsimple/index.php?id=manuals&dir=Marconi>

Quick repair project (Marconi 2024): a forum where several defects are presented and explained how to fix them: <http://www.eevblog.com/forum/repair/quick-repair-project-marconi-2024/>

Output signal (dBm) is too small: Probably the amplifier is broken. Check backwards the signal inside the synthesizer with a measuring tip.

1. Adjust the frequency of the half from the maximal Oszi-frequency
2. Measure the distance between the minimum and maximum sinus-signal. Half of the distance divide by root(2) provide the effective voltage
3. Use the data sheet for dBm calculation:
[dbm-volts-wattconversion.pdf](#)

Solved Problems:

1. Problem: No Output Signal
 - Solution: Transistor TR708 was broken. The Transistor has been replaced by a BC847 Transistor.

Marconi Synthesizer 2023B (Q-Port)



- Manual 2023B:

[datenblattmarifr2023b_2025.pdf](#)

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