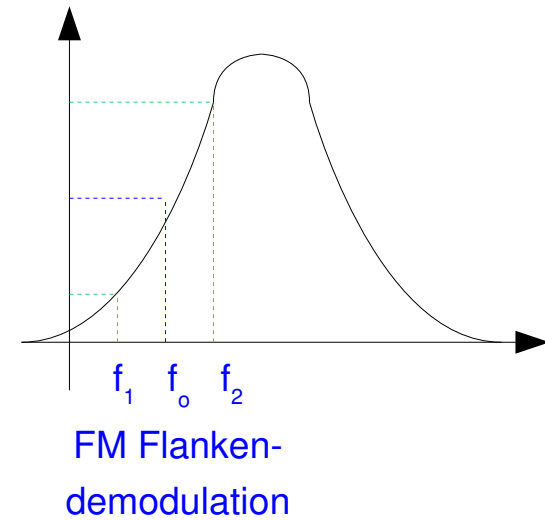
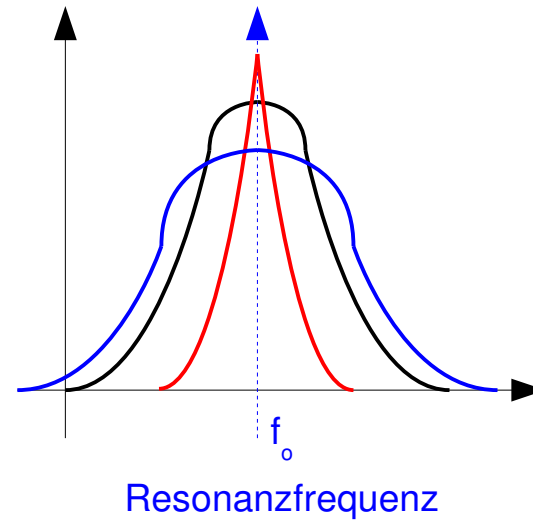
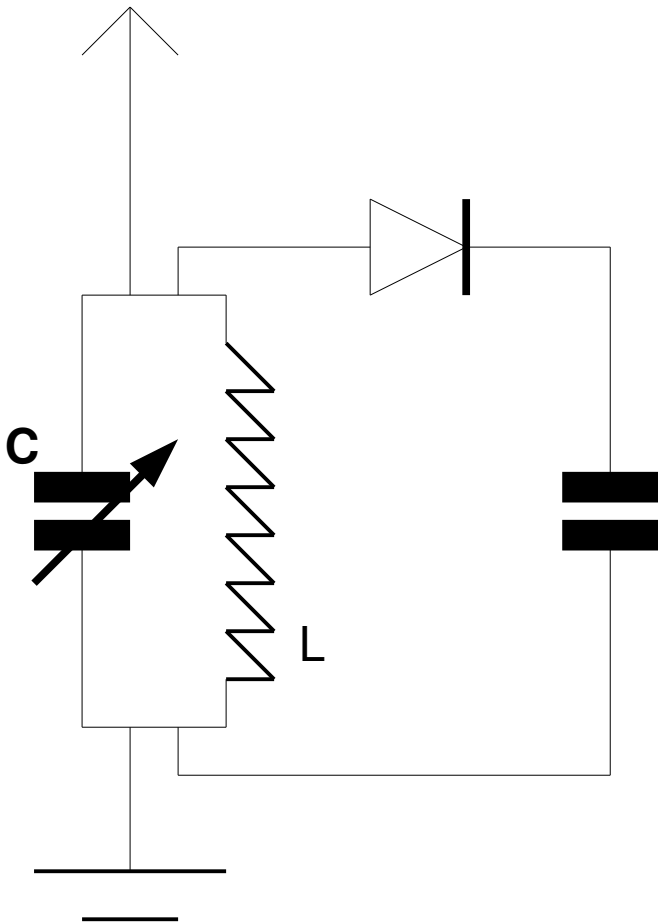


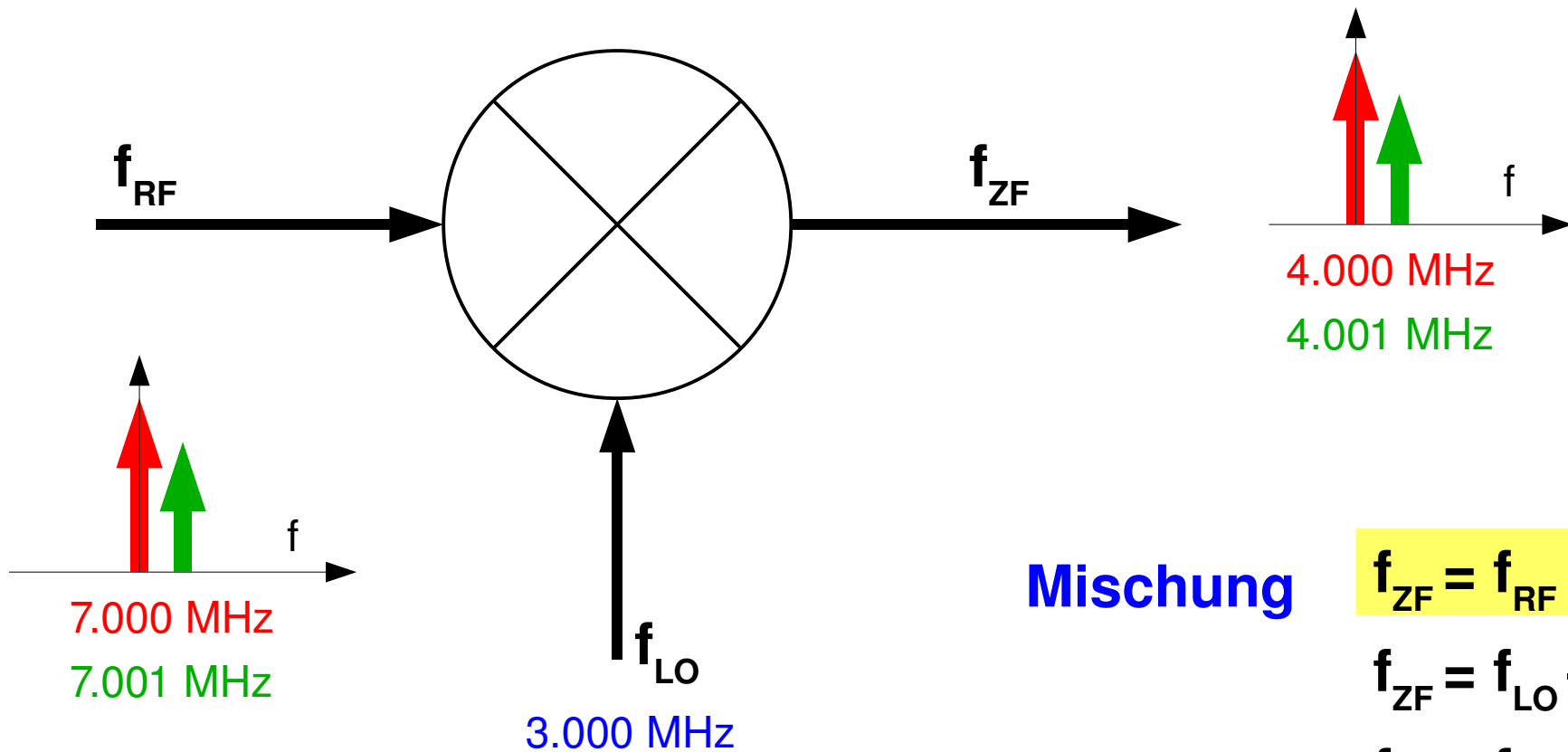
Funkgeraete Technik

Christoph OE1CPA

04.12.2007

- Selektion durch Schwingkreis
- Mischung von Frequenzen
- MW/AM Superhet
- CW/SSB Demodulator mit BFO
- Blockschaltbild Empfaenger
- Blockschaltbild CW Transceiver + Komponenten
- DDS Direct Digital Synthesizer
- CW TRX PAM1



**Mischung**

$$f_{ZF} = f_{RF} - f_{LO}$$

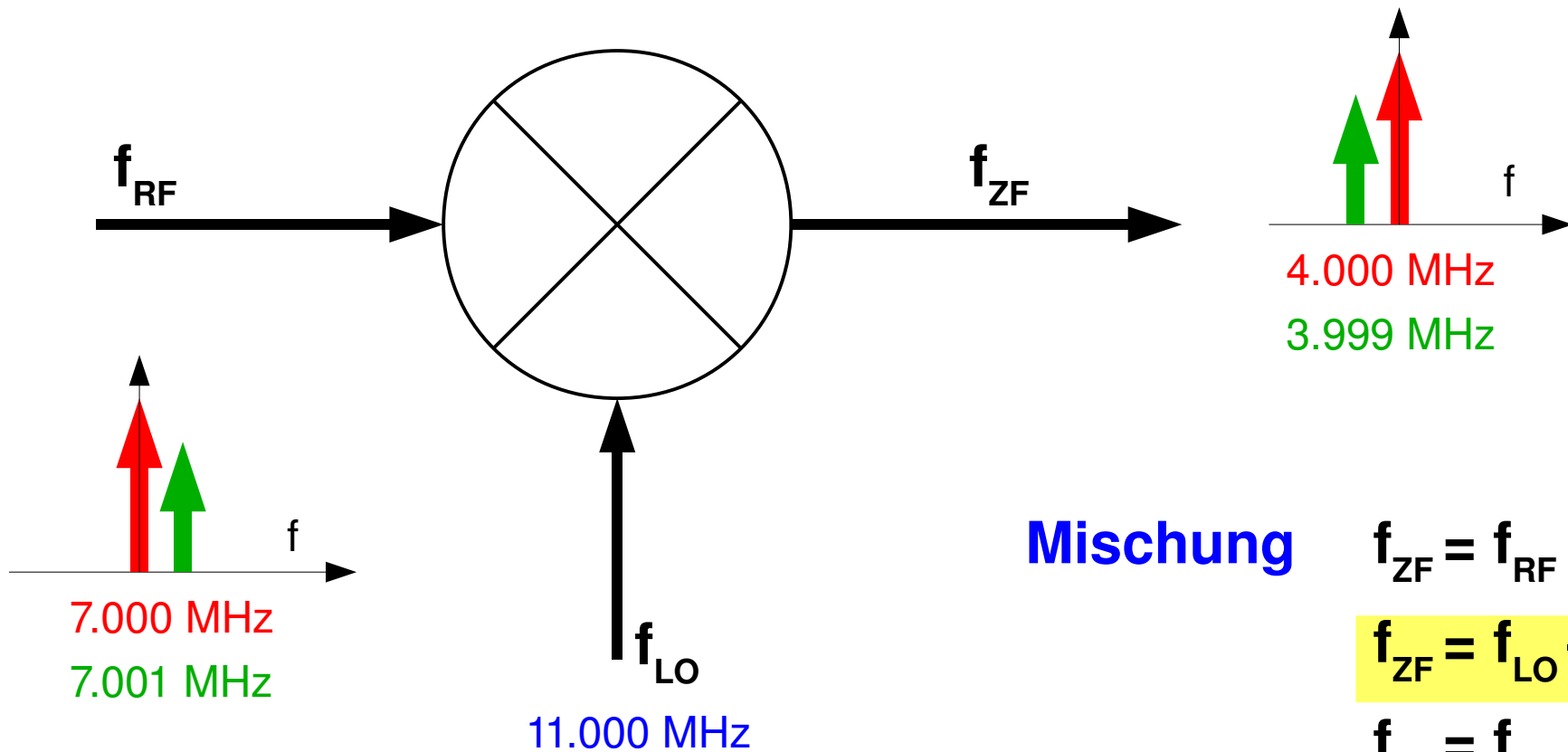
$$f_{ZF} = f_{LO} - f_{RF}$$

$$f_{ZF} = f_{LO} + f_{RF}$$

Empfang

$$f_{RF} = f_{LO} - f_{ZF}$$

$$f_{RF} = f_{LO} + f_{ZF}$$

**Mischung**

$$f_{ZF} = f_{RF} - f_{LO}$$

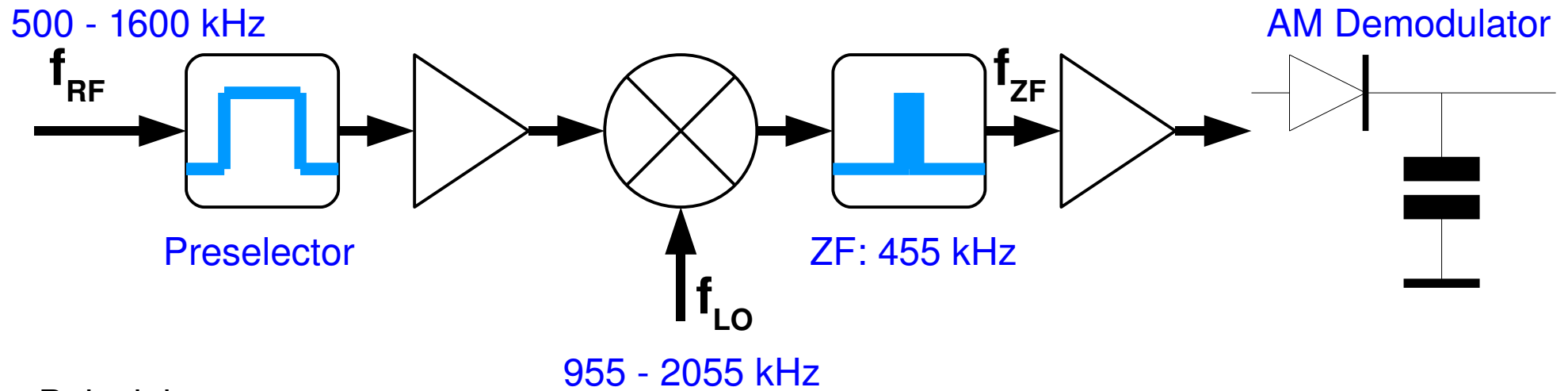
$$f_{ZF} = f_{LO} - f_{RF}$$

$$f_{ZF} = f_{LO} + f_{RF}$$

Empfang

$$f_{RF} = f_{LO} - f_{ZF}$$

$$f_{RF} = f_{LO} + f_{ZF}$$

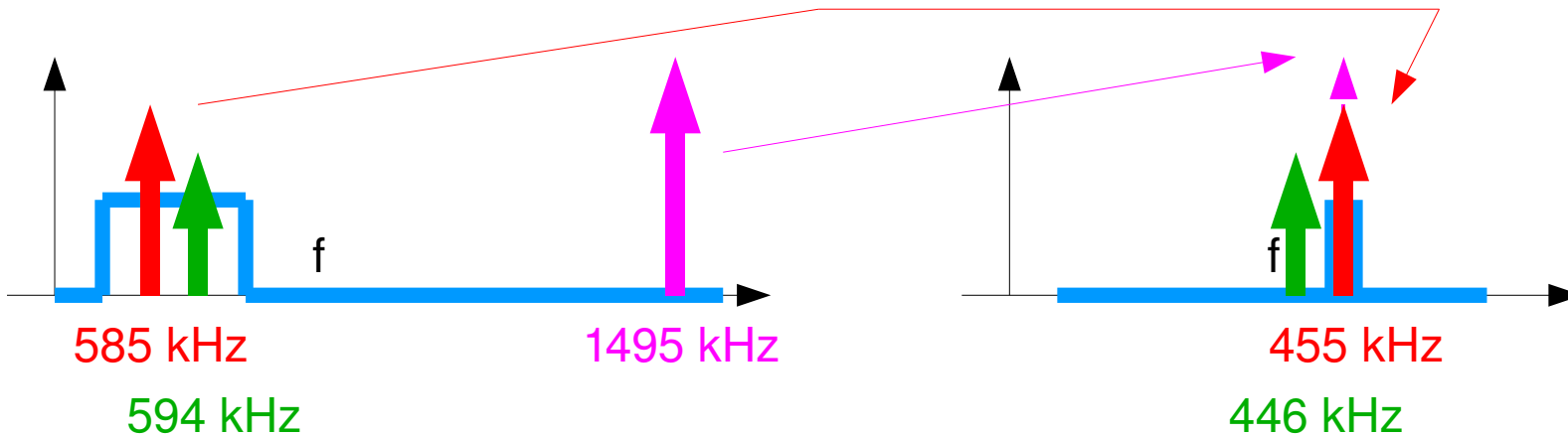


Beispiel:

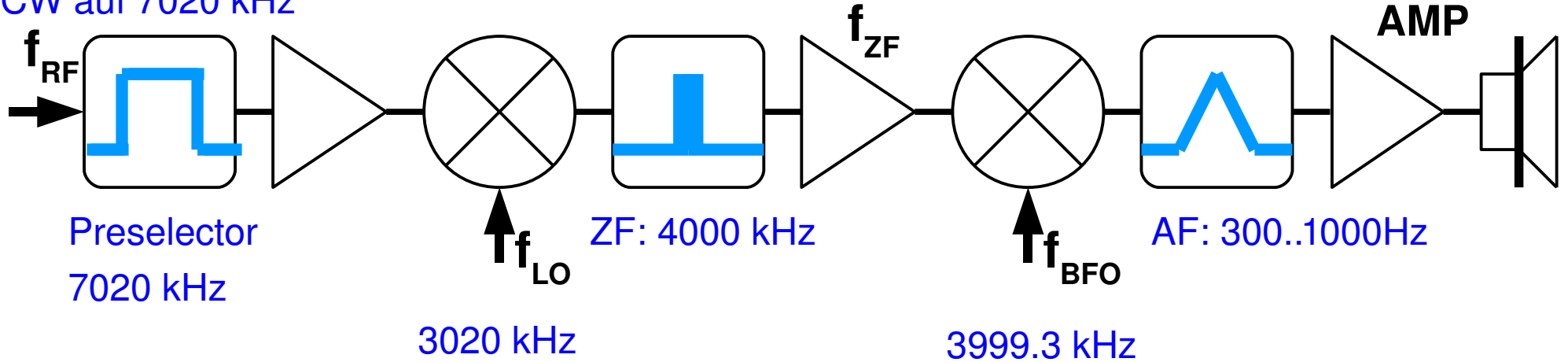
Empfangswunsch:
585 kHz

LO: $585 + 455 \text{ kHz} =$
1040 kHz

Filter schmalbandig
auf **455 kHz**



CW auf 7020 kHz

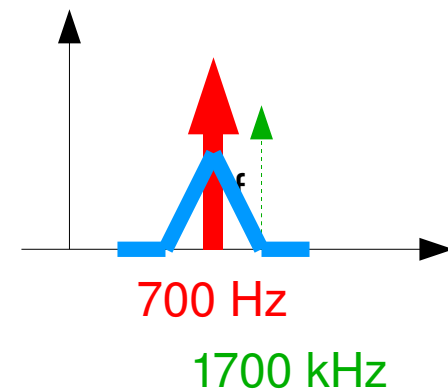
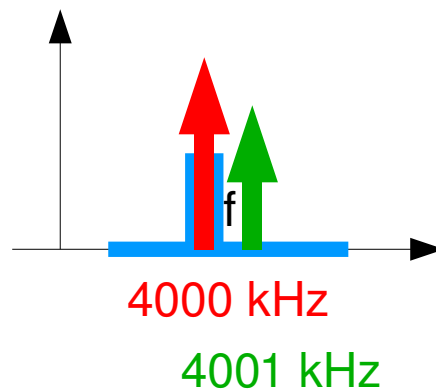
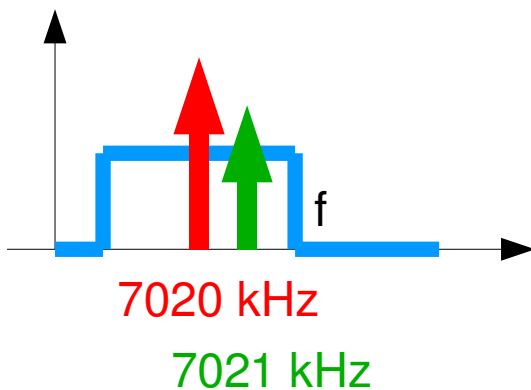


Beispiel:

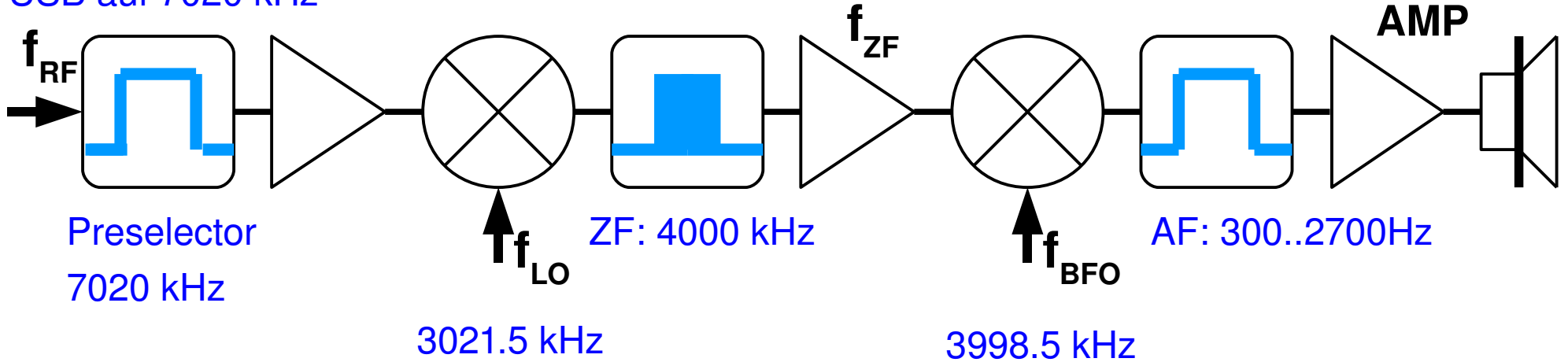
Empfang:
7020 kHz

LO: $7020 - 4000 \text{ kHz} =$
3020 kHz

BFO: $4000 \text{ kHz} - 700 \text{ Hz} =$
3999.3 kHz

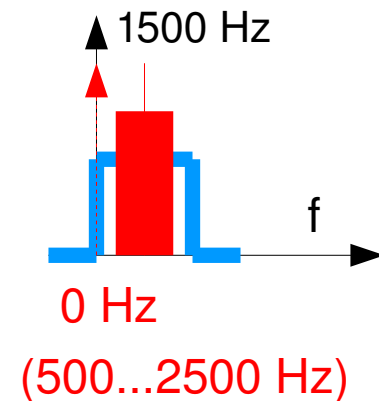
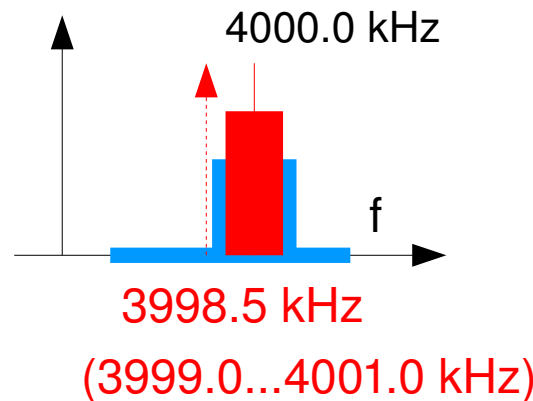
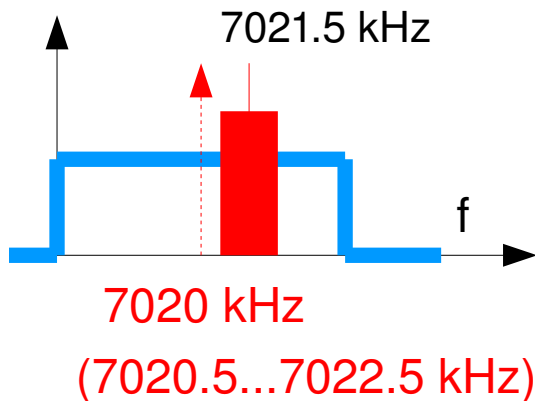


USB auf 7020 kHz

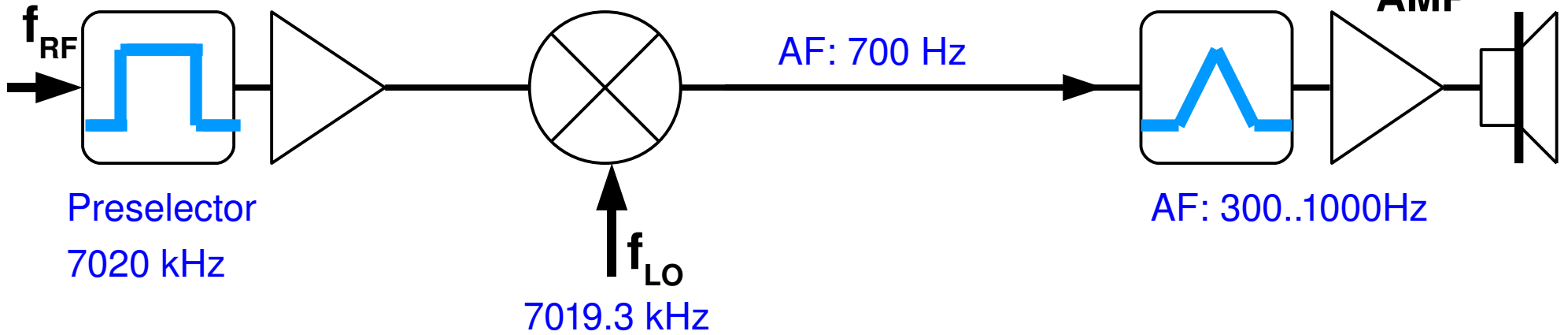


Beispiel (USB):

Empfang:	LO: $7020 - 3998.5 \text{ kHz} =$	BFO: $4000 \text{ kHz} - 1500 \text{ Hz} =$
7020 kHz USB	3021.5 kHz	3998.5 kHz



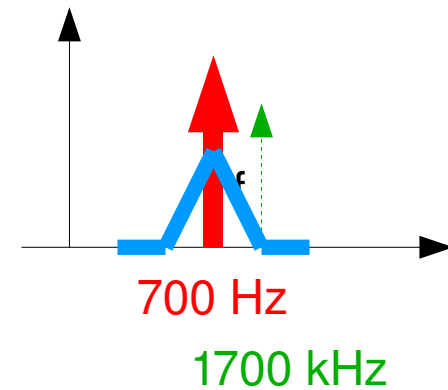
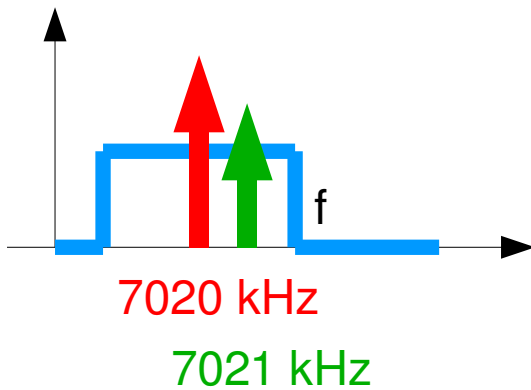
CW auf 7020 kHz



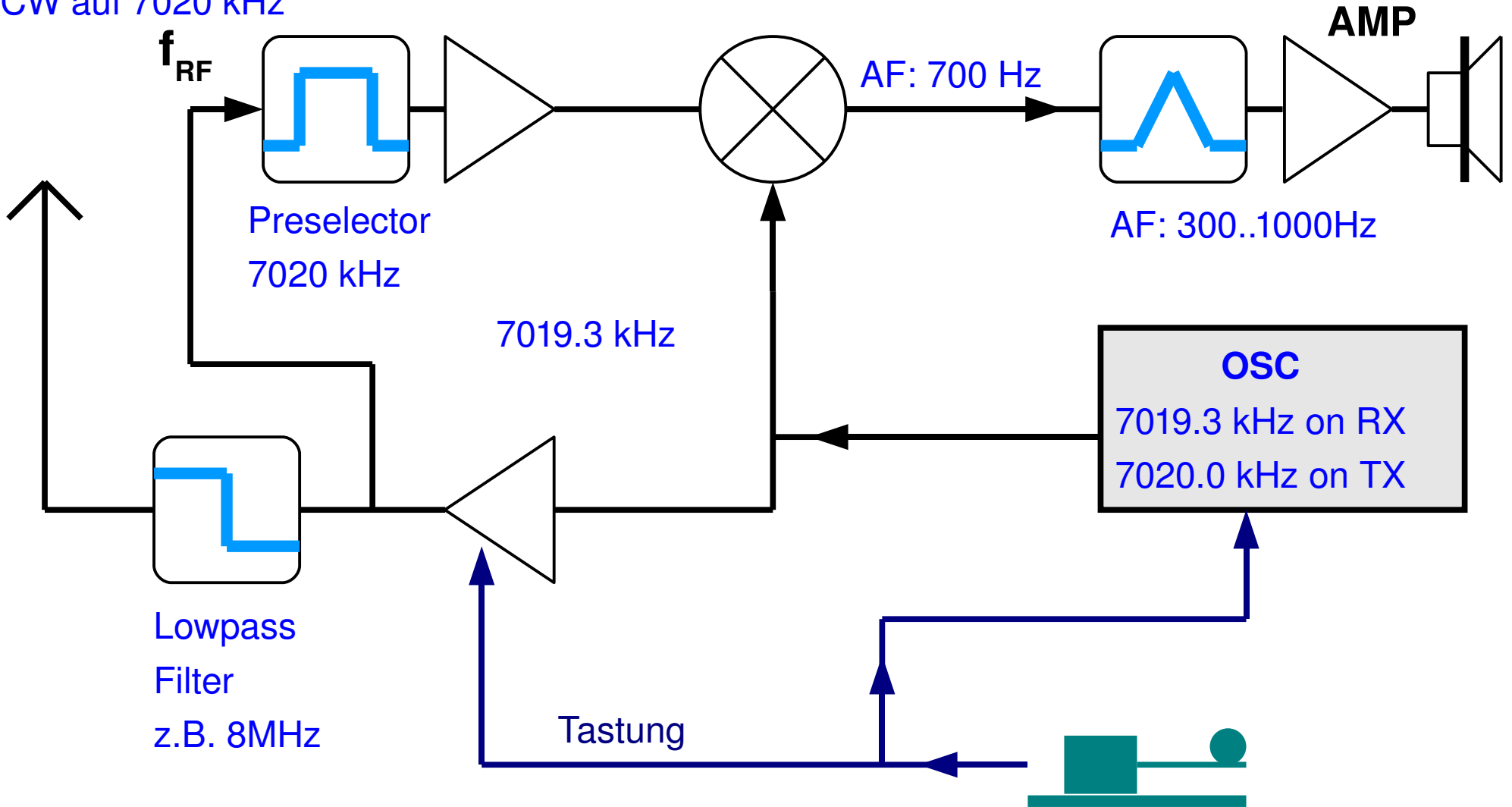
Beispiel:

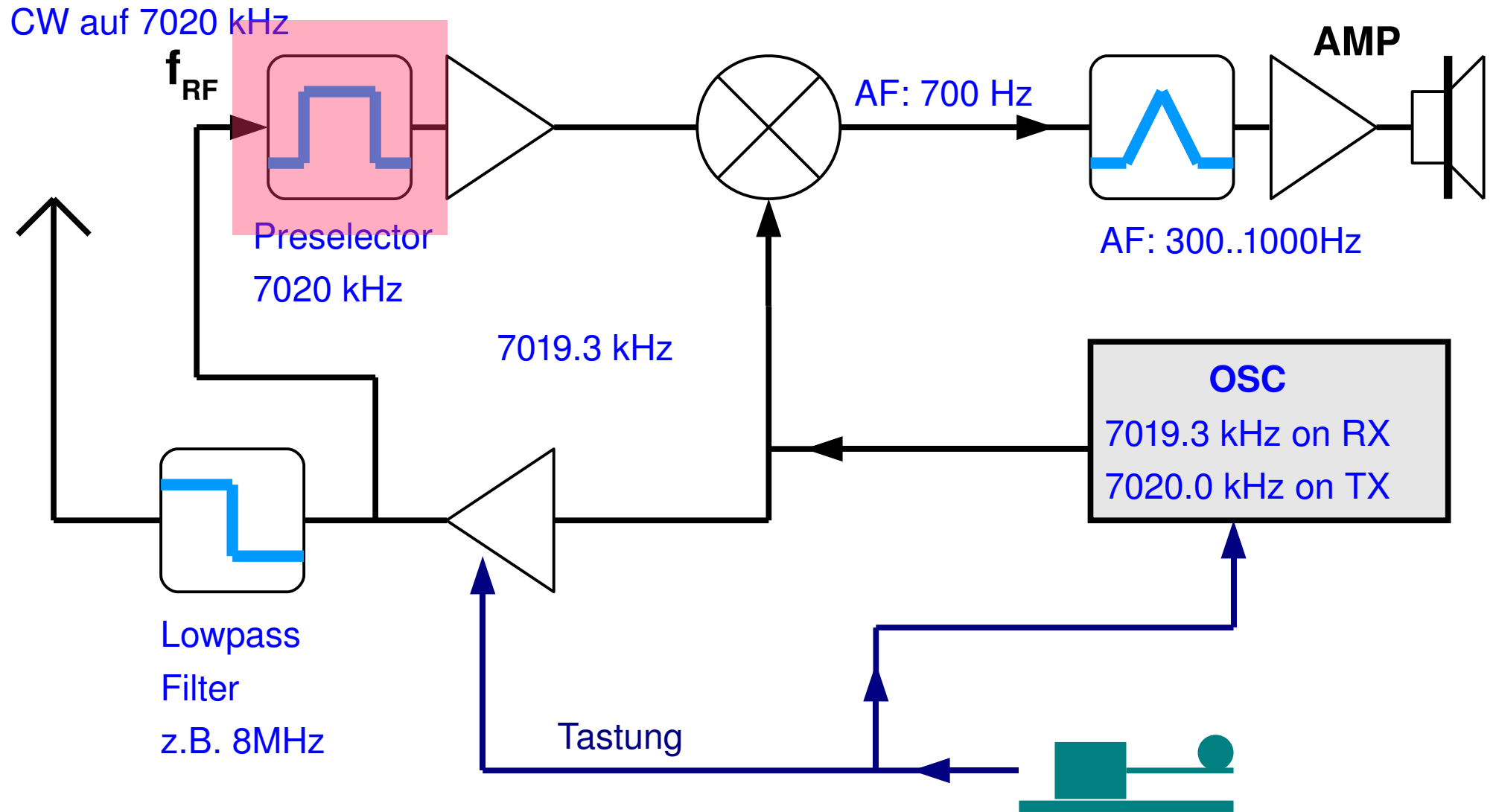
Empfang:
7020 kHz

LO: 7020 kHz - 700 Hz =
7019.3 kHz

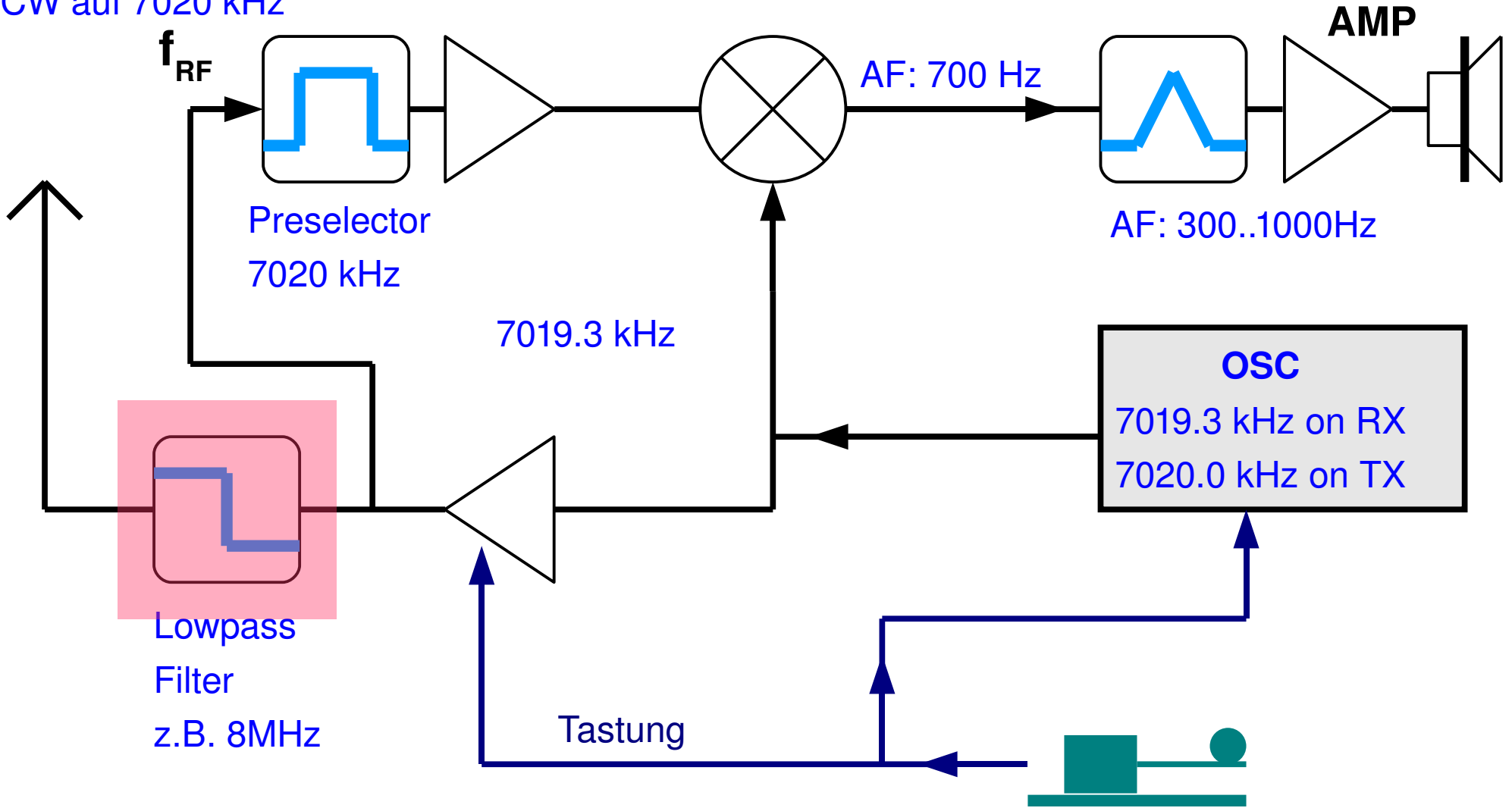


CW auf 7020 kHz

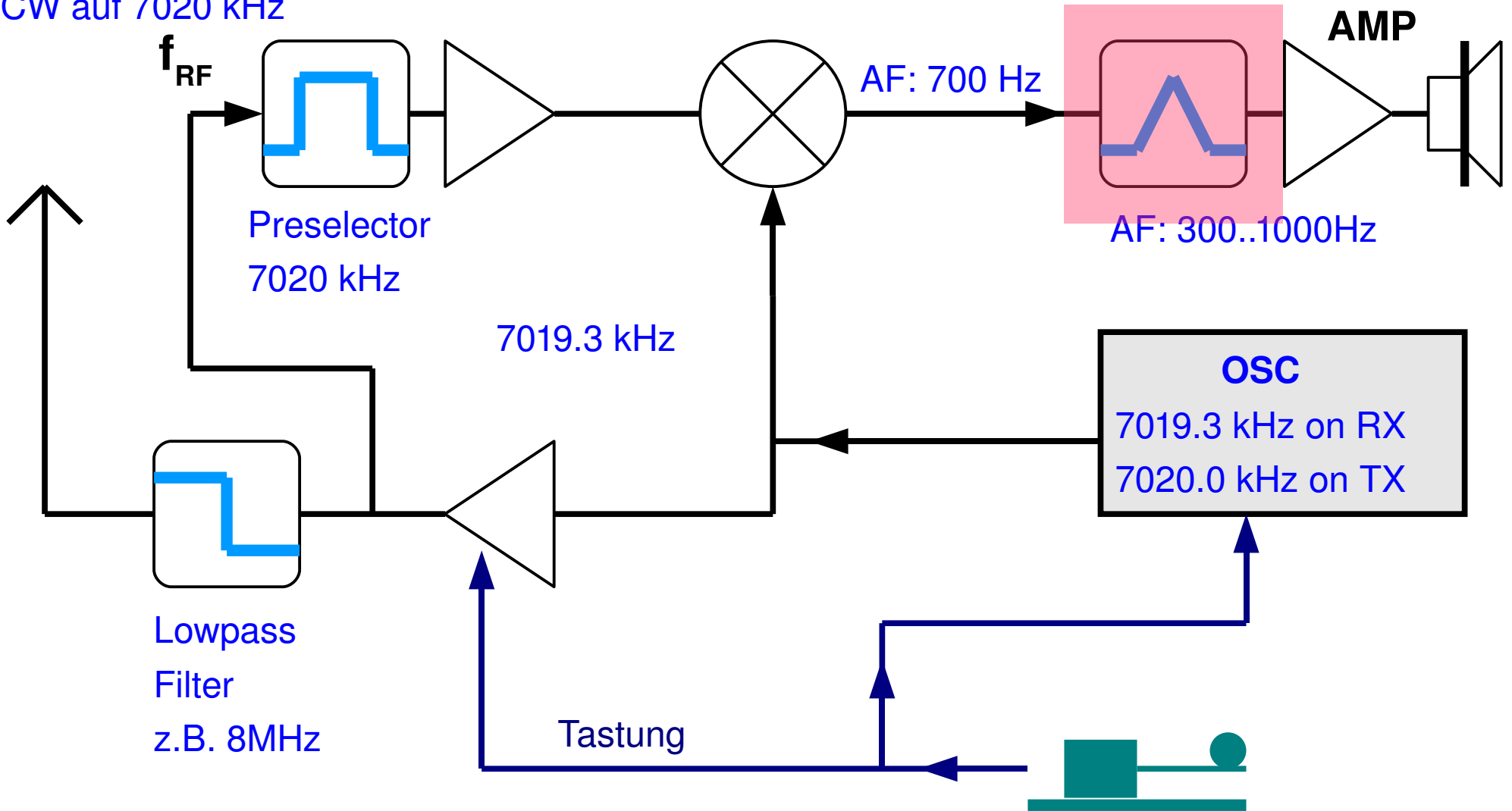




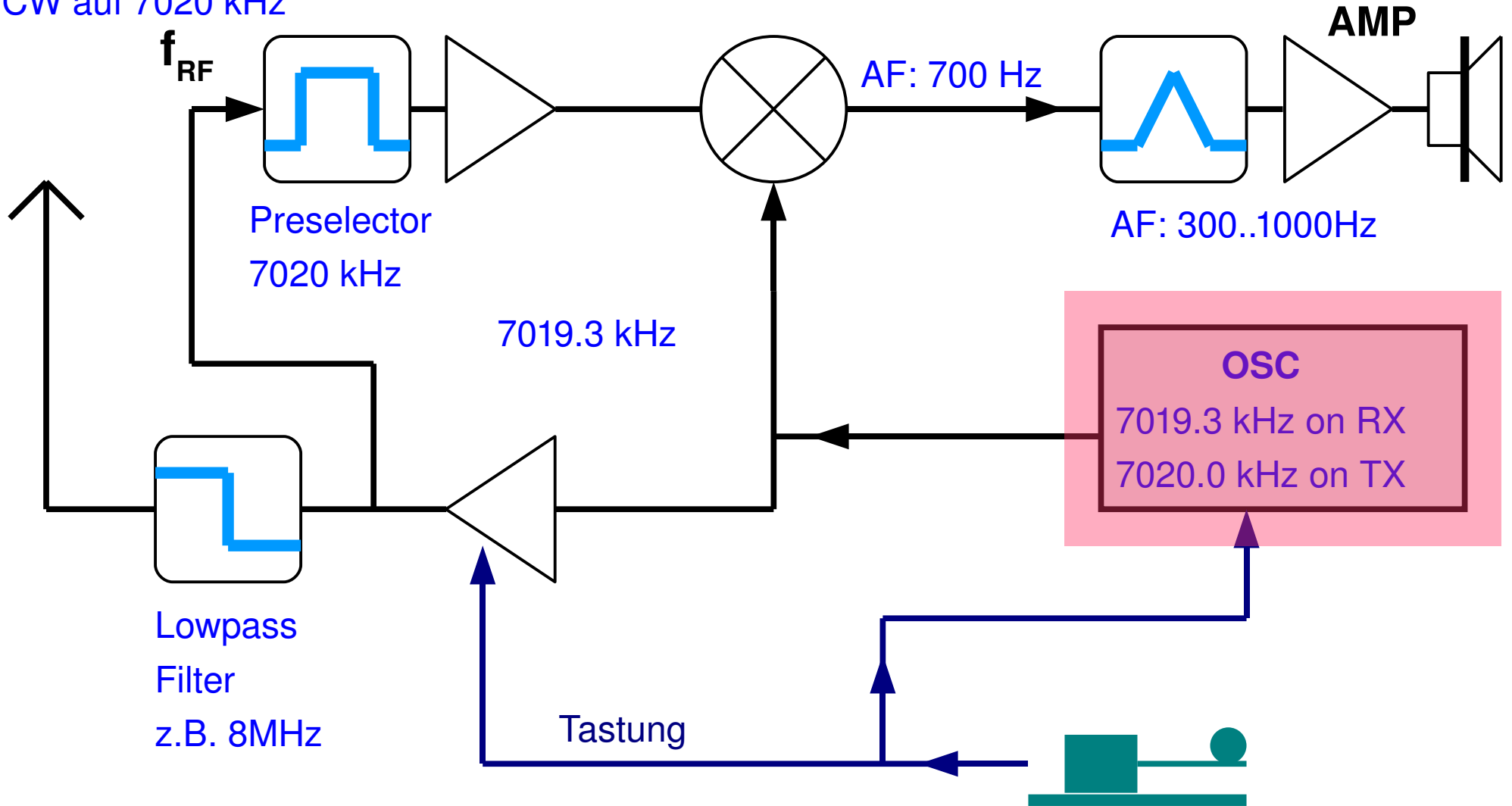
CW auf 7020 kHz



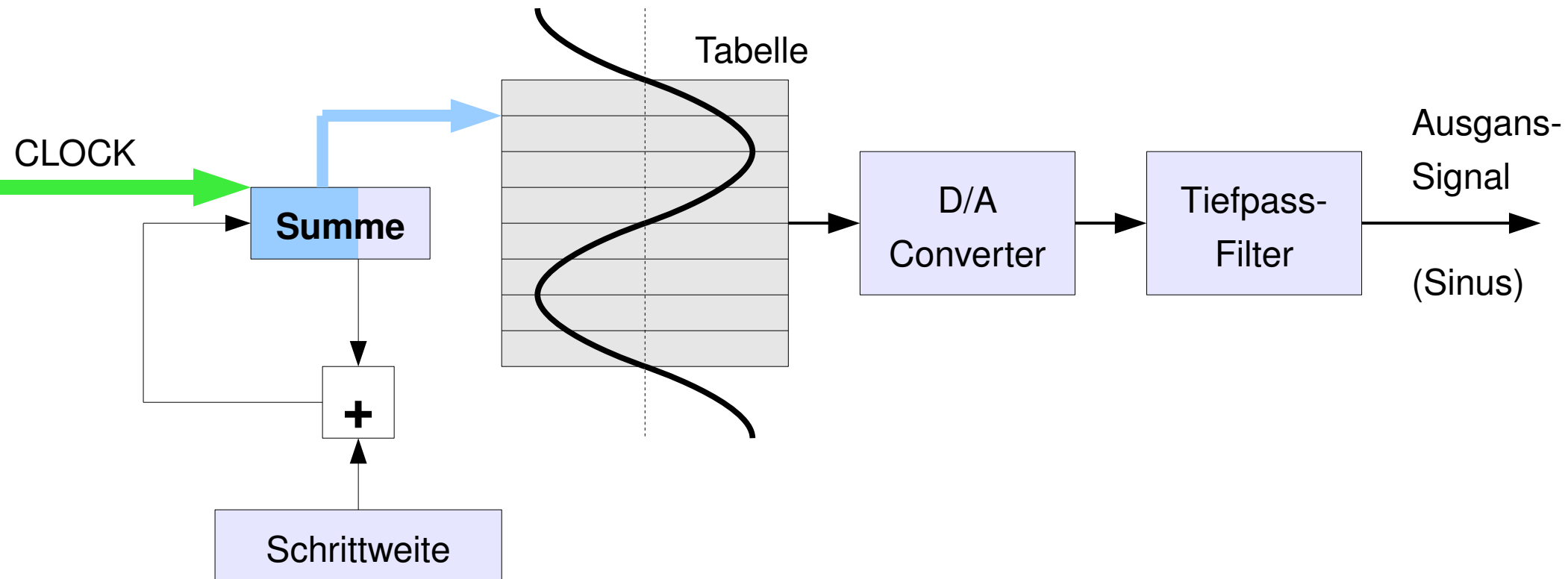
CW auf 7020 kHz



CW auf 7020 kHz



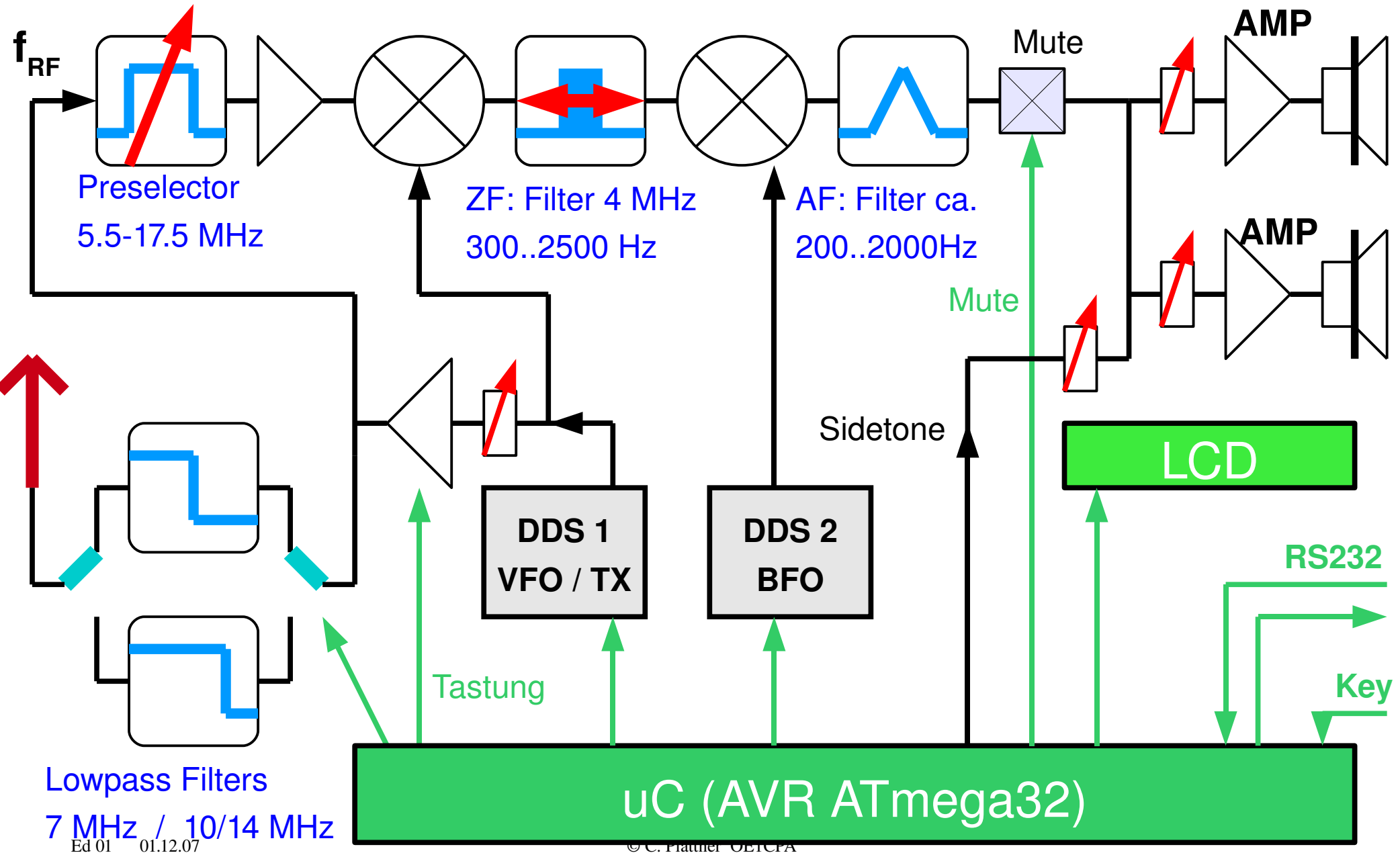
DDS = Direct Digital Synthesizer



OE1CPA

CW TRX – PAM1 - 1



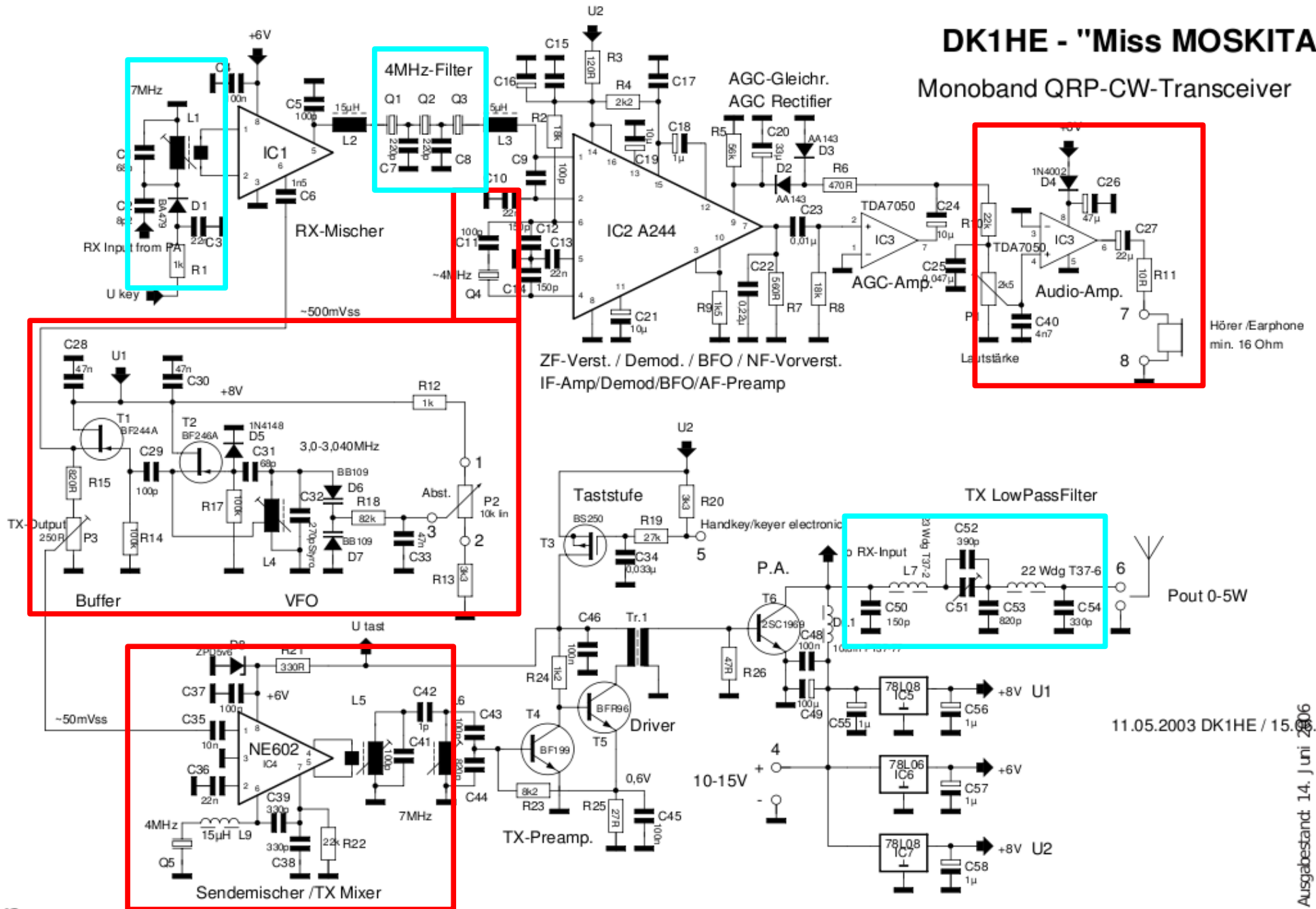


- Funktionen

- VFO A/B, A=B
- SPLIT
- BAND, MODE
- RIT, SHIFT
- LCD, LAMP
- CWFB
- BK
- SPOT
- BFO
- SQUELCH
- OSC Mode
- Calibration
 - DDS VFO/BFO
 - ZF Filter Frequency
 - CW/SSB Offset
 - CW speed, pitch
 - BK timeout

DK1HE - "Miss MOSKITA"

Monoband QRP-CW-Transceiver



Hörer /Earphone
min. 16 Ohm

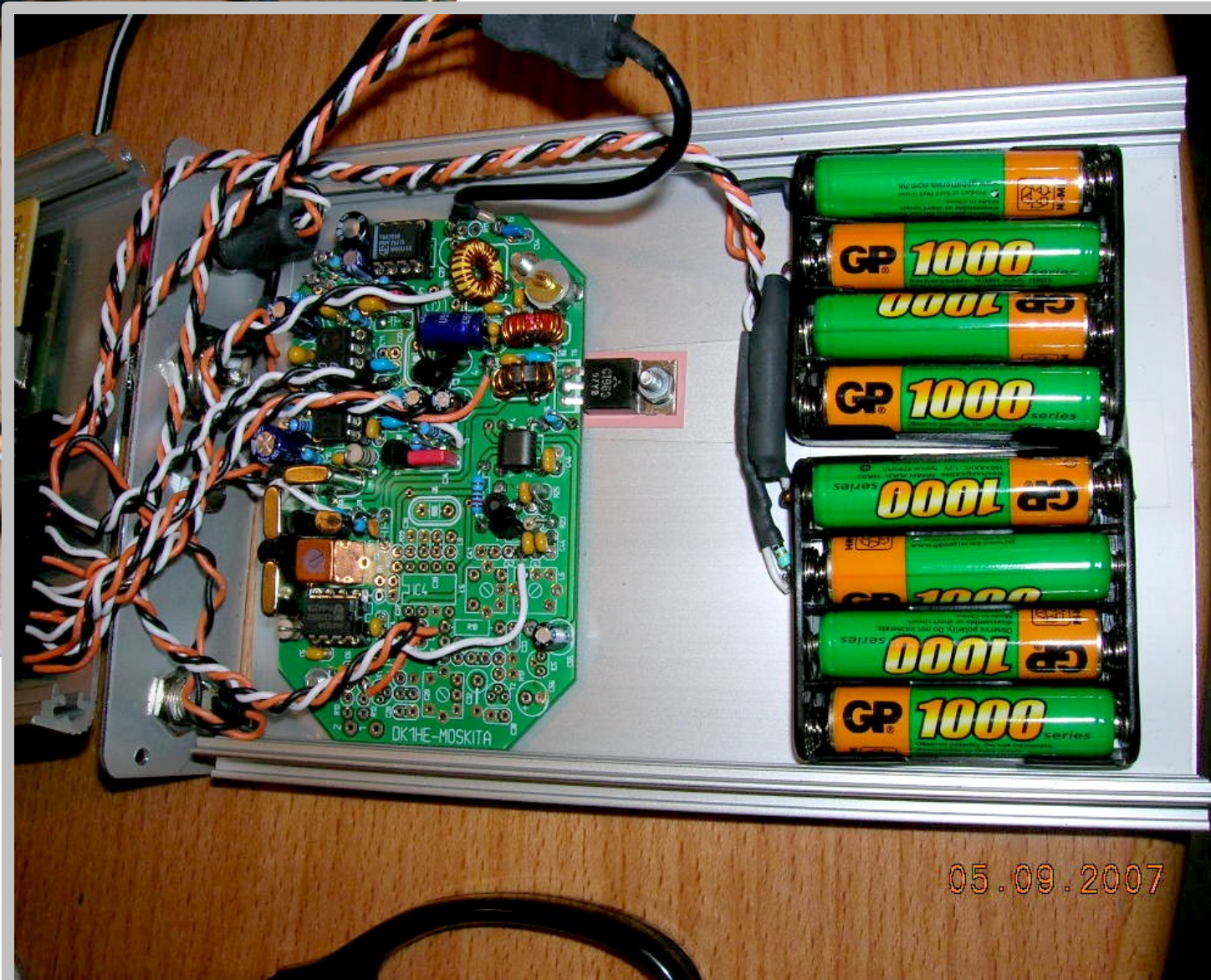
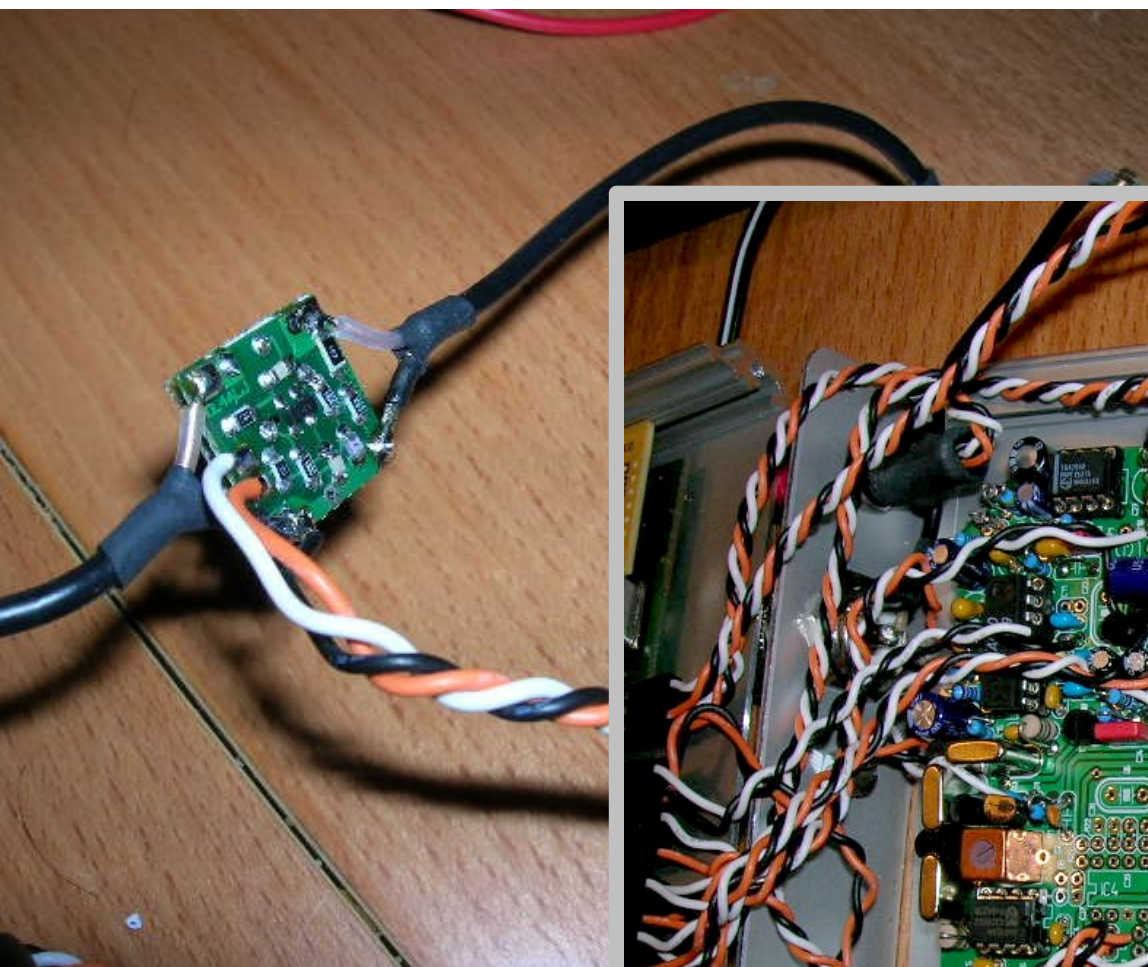
Pout 0-5W

11.05.2003 DK1HE / 15.03.03 DL



18.08.2007





ENDE

Funkgeraete Technik

Vielen Dank

Christoph OE1CPA