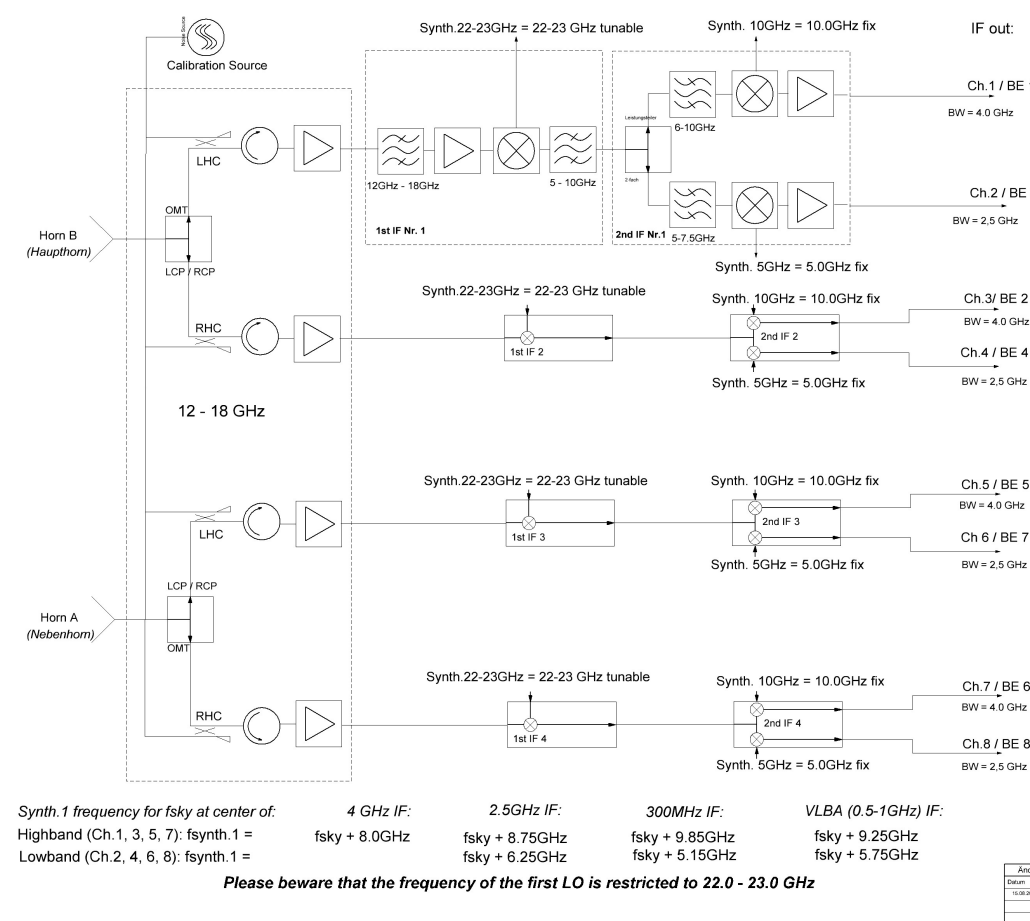


Technical Documentation of the Ku-Band Receiver 12 - 18 GHz (S20mm)

Type	HEMT cooled			
Channels	8	(upper/lower band of 2 polarizations in 2 horns each)		
Receiver Noise	30K			
Frequency range	12 GHz - 18 GHz			
Polarization	LHC/RHC	2 horns		
Calibration	Noise diode			
1. IF	5 - 10 GHz	(Synthesizer 1 = 22 - 23 GHz)		
2. IF	0 - 4 GHz	lower band (Synthesizer 21 = 10 GHz)		
	0 -2.5GHZ	upper band (Synthesizer 22 = 5 GHz)		
Synth.1 frequency for fsky at center of:	4 GHz IF	2.5 GHz IF	300 MHz IF	0.5-1 GHz IF
Highband (Ch.1, 3, 5, 7): fsynth.1 =	fsky + 8.0GHz	fsky + 8.75GHz	fsky + 9.85GHz	fsky + 9.25GHz
Lowband (Ch.2, 4, 6, 8): fsynth.1 =		fsky + 6.25GHz	fsky + 5.15GHz	fsky + 5.75GHz



Simplified Block Diagram of the complete receiver, (RK on 19.3.2019)

Block Diagram of the 1st IF conversion, (CK on 8.3.2019)

Block Diagram of the 2nd IF conversion, (CK on 8.3.2019)

From:
<https://eff100mwiki.mpifr-bonn.mpg.de/> - **Effelsberg 100m Teleskop**

Permanent link:

https://eff100mwiki.mpifr-bonn.mpg.de/doku.php?id=electronics:rx:techinfo:documentation_ku-band_rx_s20mm&rev=1576234827 

Last update: **2019/12/13 12:00**