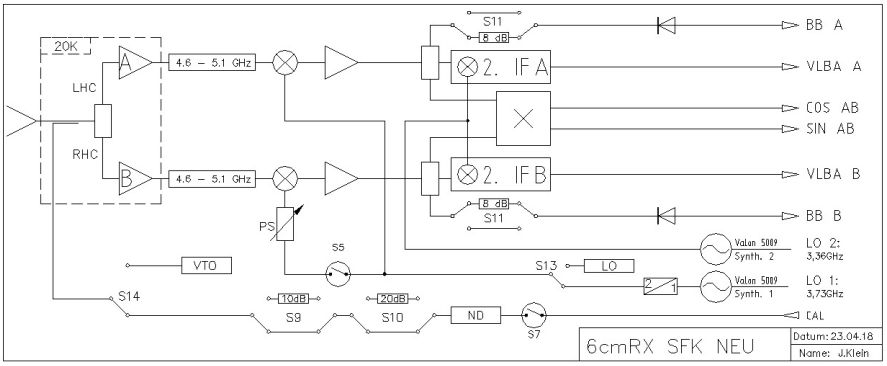
Technical Documentation of the 6cm Receiver 4.6 - 5.1 GHz (S60mm)

Type	HEMT cooled	
Channels	4	
Receiver Noise	9K	
Frequency range	4.6 - 5.1 GHz	
Polarization	LHC/RHC	2 horns
Calibration	Noise diode	phase cal for VLBI
Polarimeter	2 Broadband Polarimeters	
1st IF	2360 - 2860 MHz	
LO1	Valon 5009	fsynt.1 = 3.73 GHz x 2 (LO1 = 7.46 GHz)
2nd IF	0.5 - 1 GHz	
LO2	Valon 5009	fsynt.2 = 2.2 GHz



Simplified Block Diagram of the receiver, (RK on 24.4.2018)

Detailed Block Diagram of the complete receiver, (ZK on 18.5.2018)

Comment

This is a 4 channel system with cooled HEMT preamplifiers. It has been constructed for sensitive Continuum, VLBI and Pulsar observations. It is permanently installed in the secondary focus cabin. The frontend has 2 identical dewars, each comprising one horn, a cooled directional coupler, circular (RHC and LHC) transducer and 2 HEMT amplifiers etc.

The Broadband Polarimeters are placed at the frontend, because the system has a 1 GHz bandwidth.