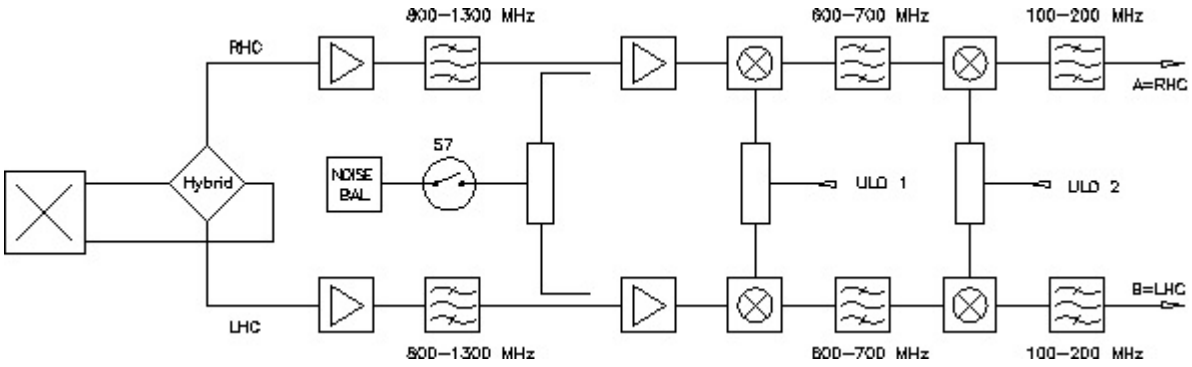
Technical Documentation of the 30cm Receiver 800- 1300 MHz (P300mm)

Type	HEMT, uncooled
Channels	2
Receiver Noise Temperature	50 K - 95K (see table)
Frequency Range	0.8 - 1.3 GHz
Bandwidth RF-Filters-fixed	0.8 - 1.3 GHz
Polarization	LHC and RHC
Calibration	Noise Diode after 1. Amplifier
feed	Dipole System
1. Oscillator	ULO1
1. IF	600-700 MHz
2. Oscillator	ULO2
2. IF	100 - 200 MHz

Block Diagram



Receiver Noise Temperature

Frequency [MHz]	$T_{Rec,RHC}$ [K]	$T_{Rec,LHC}$ [K]	$T_{Cal,RHC}$ [K]	$T_{Cal,LHC}$ [K]
863	65	63	15.0	13.7
1022	50	51	13.1	11.4
1135	57	57	12.9	11.3
1222	61	62	12.9	12.0
1300	95	94	16.1	15.3

Commenets

> The noise measurements were made in the laboratory with 2 MHz bandwidth and refer to the feed.

This system was constructed particularly for VLBI, but was already used during test measurements also for spectroscopy, continuum and pulsar observations. This frequency range is not free of interference. Observers wanting to do continuum or pulsar observations might have to search for a frequency range not obstructed by interference and/or use a narrower bandwidth.

This system is part of Primary Focus Multi Frequency Box #2 (PM2).

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