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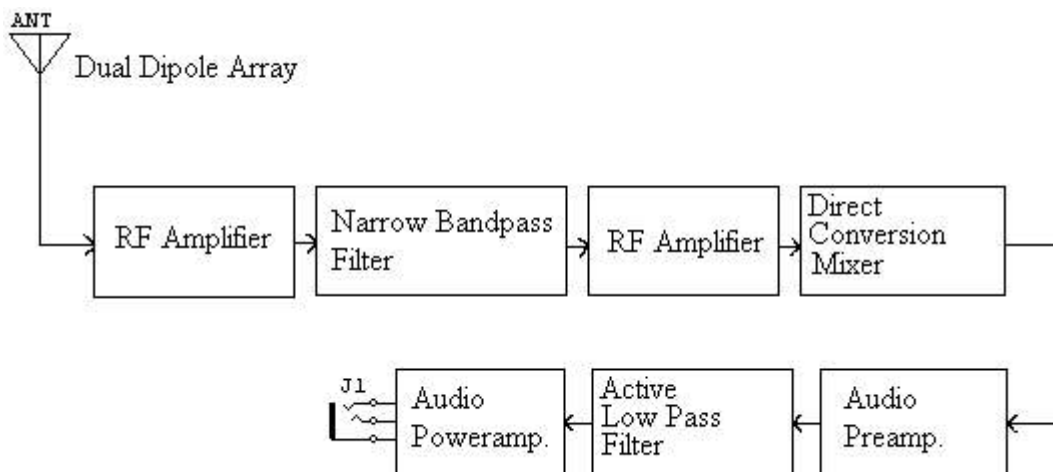
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## Receiver for Jupiter

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### Guru Receiver Block Diagram



Guru receiver Block diagram is simple and straight forward. Signals received by the Dual Dipole Array are fed to the RF amplifier which is tuned to 20.1 MHz. Since there are very strong reception of SW broadcasts adjacent to 20.1MHz in India, interference from SW stations must be rejected. Solution to this problem is the insertion of Narrow Bandpass filter in between the RF amplifier and Mixer. This will help to attenuate out of band SW broadcasts to sufficient level.

The insertion of Narrow Bandpass filter introduces some loss in passband. So to overcome this loss another section of Rf amp is added. Signals thus filtered and amplified are then given to SA612 Mixer which generated its local oscillator(LO) signal internally so no external Local Oscillator is required. This receiver is direct conversion receiver because LO is same as the signal frequency. Therefore the signals at 20.1 MHz are downconverted to audio frequencies.

The Low pass filter followed by the mixer band limits the signals up to 3.3KHz. Audio Preamplifier is having low noise characteristics, amplifies the audio signals. finally the audio poweramp amplifies the signals so as to drive headphone.