

ABSTRACT

RADIO-FREQUENCY SIGNAL RECEPTION AND/OR
TRANSMISSION DEVICE WITH NOISE REDUCTION

The radio-frequency signal reception and/or transmission device includes an antenna (8) for picking up or transmitting radio-frequency signals, a bandpass filter (9), at least one low noise amplifier (11) for amplifying the filtered signals, an oscillator stage (1) for generating first high frequency signals (S_{VCO}), at least one frequency divider (14) for dividing by M the frequency of the first signals in order to generate second high frequency signals (S_D), where M is an integer number greater than 1, at least a first mixer unit (12) for mixing the filtered and amplified radio-frequency signals (S_R) with the first high frequency signals (S_{VCO}), and at least a second mixer unit (13) for mixing the intermediate signals supplied by the first mixer unit with the second high frequency signals in order to produce baseband signals (I_R , Q_R). The stage oscillator (1) is configured to generate first high frequency signals (S_{VCO}), whose frequency is outside the frequency band of the bandpass filter and higher than the frequency of the received radio-frequency signals by a factor M/N comprised between 1 and 2, where N is an integer number greater than 1.

Figure 1