

Method for adjusting resonance UHF-amplifier to given frequency comprises of the following operations: formation of two testing UHF-signals with frequencies symmetrical to resonance frequency out of the boundaries of the resonator pass band, of transmitting signals through the UHF-amplifier, comparing the parameters of those signals to each other, with formation of the end signal that controls the natural frequency of the resonator till equality of the parameters being compared is achieved, of excitation of the UHF-amplifier resonator by continuous UHF-oscillations of given frequency and, in turn, with packets of the testing UHF-oscillations at the lower and upper side frequencies of the UHF-amplifier resonator; of mixing together separately UHF-oscillations, that are amplified by the UHF-amplifier, and UHF-oscillations at the input and output of the UHF-amplifier, separating from the mixed oscillations packets of the low-frequency measuring and the support signals of the modulation frequency, comparing the phases of the packets of measuring and support signals, forming a sequence of video-pulses with amplitudes proportional to the phase difference of the signals being compared, selecting from the modulated video-pulses the voltage of the low-frequency envelope line that is used as a differential control signal. The appliance for implementation of the method has a high-frequency quartz generator, frequency multiplier, balance UHF-modulator, UHF high frequency filter, three UHF low frequency filters, a waveguide switch, twin waveguide T-element, resonance UHF-amplifier, low frequency amplifier, phase-sensitive rectifier, two frequency dividers, two one-cycle UHF mixers, a directed branch element, two amplifiers-limiters, phase detector and a servomotor.