Theory of transmitter for QP-350-U2

Tx Baseband Processing

The audio signal input from MIC enters U601, and is then converted into digital signal by analog-to-digital conversion.

Afterwards, the signal is divided by the digital low-pass filter into 2 flows. One flow serves as the signal of VOX detection;

the other is processed by AGC, compandor, high-pass filter, encryption and pre-emphasis, converted to baseband signal via digital-to-analog conversion to output. Then the signal is processed by the active low-pass filter, and sent to the VCO for modulation.

RF Power Amplifier

The modulated carrier signal output from VCO goes to the front-stage amplifier Q401, driver-stage amplifier Q402 and final-stage amplifier Q403 respectively. Afterwards, the amplified RF signal enters the low-pass filter (LPF) circuit through diode D401, and then is transmitted via the antenna after ultroharmonics are removed.D402 and D501 COMPOSE THE Rx-TX switch circuit.