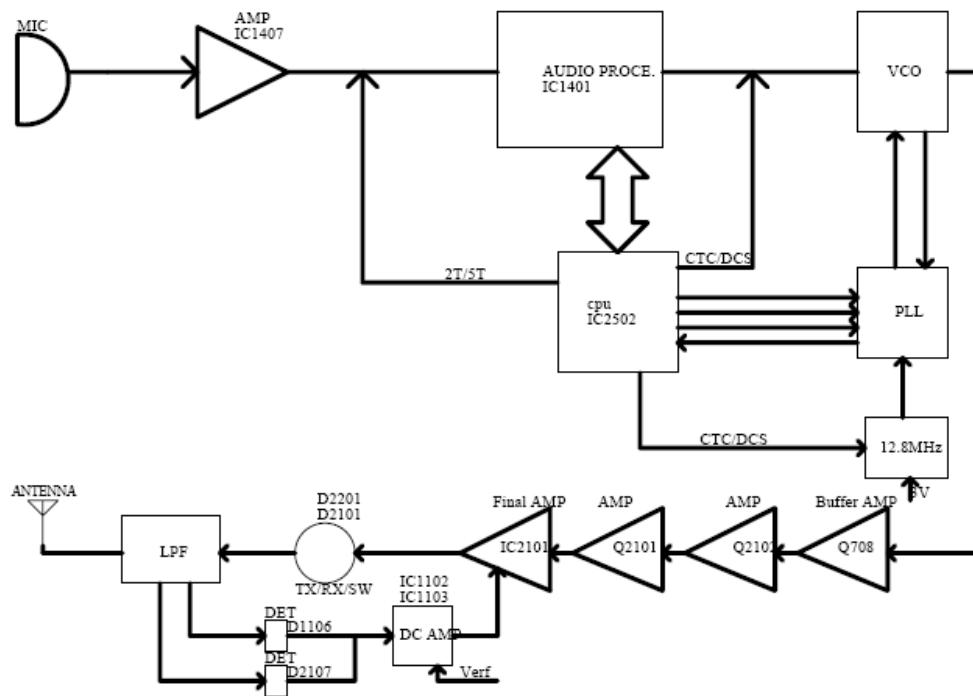


## Theory of Transmitter for QM-790-V

The transmitter circuit is composed of the MIC circuit, modulation circuit, RF driver, final-stage power amplification circuit and APC circuit.



Transmitter Circuit

### 1. MIC and Modulation Circuit

The audio signal from MIC is amplified by IC1407 before being pre-emphasized and encoded by IC1401. The output audio signal is added into signalling and then is fed through VCO for modulation.

### 2. RF Driver and Final-Stage Power Amplification Circuit

The Tx-RF signal output from Q701 in the VCO circuit is amplified by Q703, drivers Q2102 and Q2101. The amplified signal is then fed to IC2101 (final-stage amplifier) and passes through LPF before reaching the antenna.

### 3. APC

The APC circuit stabilizes the output power at a predetermined level. D2107 and D1106 transform the signal from the detector to DC voltage, which is then compared with the reference voltage from CPU in IC1102 to output a DC voltage. The DC voltage controls the output power by controlling the grid of IC2101.