

7. Block Diagram.

The schematic diagram illustrates a 430MHz FM transmitter circuit. Key components and their functions include:

- Antenna and RF Path:** The antenna (ANT) is connected to an antenna switch (ANT. SW.) and a low-pass filter (LPF 520MHz). The RF path consists of a band-pass filter (BPF 460MHz), an RF LNA (Q101), another BPF (460MHz), a 1st mixer (Q102), a 1st IF filter (45MHz), and an IF amplifier (Q103). The 1st IF is 405-425MHz.
- 2nd IF and Demodulation:** The signal is processed by a 2nd IF IC (MC3371BD) with a 2nd LO of 44.545MHz. The 2nd IF is filtered by F102 (NARROW) and F103 (WIDE, 455KHz). The output goes to a limiter and demodulator, which produces an audio output and a CD OUT signal.
- Frequency Synthesis:** A PLL IC (LMX2306) is used for frequency synthesis, with a VCO, LPF, and a 12.8MHz TCXO. The PLL controls the 1st mixer and the 2nd LO.
- Control and Power:** A microprocessor (U402) controls the PLL, the PTT, and the TX_ENB. A power supply section (U301, U302, U303) provides +5V and +10V. A power detector (D504) and a power adjuster (RV501) are also shown.

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