T80 FILTER CIRCUITS
6/21/01

1. Spurious emissions are suppressed by the bandpass filter formed by L$ &L5 in the oscillator/modulator. The combination of bandpass filter and modulation shaping keeps the occupied spectrum well within FCC requirements.
2. Sub-harmonics are suppressed by these same circuits and by wave traps on the 1st and 2nd stages.
3. Harmonics are suppressed in-part by the above circuits but primarily by the output network formed by L9; L10; c27; c28; c29 and c30.

T80 CIRCUITS TO STABILIZE THE OUTPUT FREQUENCY
6/21/01

1. The Crystal controlled fundamental oscillator controls output fequency and is "rubbered" via a varactor diode at fundamental to be Frequency Shift Keyed (FSK) by a pulsed audio from the encoder. The audio pulse train is repetitive at 50 frames per second and consists of a synchronization pulse followed by six modulation pulses separated in sequence by from 1.0 ms to 2.0 ms; followed by a five millisecond synchronization pause that permits the decoder in the receiver to reset.
2. XTAL 2 is a fundamental crystal with an fo = 1/5 the desired transmit frequency.
3. The modulation input is applied to the tuning network via a Miller Integrator formed by Q3; Q4 and the discrete components between. The MI shapes the modulation pulses to form nearly the ideal trapezoidal modulation.
4. L4 and L5 is a multiplier set up as a bandpass filter to reduce occupied modulation spectrum. Q5 and attached discretes is a buffer, multiplier and amplifier.