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Clarification of Primayer Modulation as F3D

Primayer's use of the ST450 is purely for analogue signals. The send the noise signal from the pipe transducer (10Hz to approx 1kHz) over the analogue radio circuit.

F3D : The modulation input is an unspecified analogue signal which may vary continuously in frequency and/or amplitude.

The modulation input is via pin 6 of the 9 pin connector. This is an analogue input only. Audio input up to 15Khz was applied to this port; the low pass filter prevents high frequency audio from getting to the modulator as shown by the modulation response data taken between 80 Hz and 10 kHz, with maximum deviation response at 80 Hz.

The input level is such that the modulation circuit is operating just below its limiting threshold. Should the input level rise for any reason then limiting occurs and excessive frequency deviation is prevented. The low-pass filtering in the modulation circuit ensures that there are no excessive sideband levels beyond those required for normal operation.

The transmitter can only work in narrowband FM mode. The modulation circuit only handles audio signals; if you throw a digital data-stream at it then all that happens is that the modulation level is made independent of the amplitude of the input and the waveform is filtered to avoid making the occupied bandwidth excessive.

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