



NRK DX2020

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Technical Description Audio Ltd. Tx2020 and Dx2020

The Audio Ltd. Tx2020 and Dx2020 comprise a pocket transmitter and receiver together forming a complete UHF Wireless Microphone system.

Tx2020 Pocket Transmitter is a battery powered synthesised FM transmitter with up to 32 frequencies stored in EEPROM. Three RF stages are used comprising of a VCO, buffer and Power amplifier. The Tx2020 is capable of up to 50mW of RF power at the antenna. The synthesiser is referenced to a xtal at 6.4 MHz. The transmitter is powered from an MN1604 alkaline battery or equivalent.

Audio stages capable of high quality, and low distortion are used with a frequency dependant square root companding system. An optical audio overload limiter is provided which can handle more than 20dB of overload. A 10 position audio gain control is provided.

The Tx2020 transmitter is intended to be body worn and is typically used in the recording of sound dialogue for film and television.

Dx2020 Miniature Diversity Receiver is a complementary receiver for use with the Tx2020 transmitter. It is a triple superheterodyne true diversity system. A synthesised first local oscillator is employed with up to 32 stored frequencies referenced by a 6.4MHz xtal. Saw filters are employed in the first IF, ceramic filters in the second, where the main selectivity is achieved, and finally a conversion to around 250KHz for limiting and demodulation takes place.

Two complete receivers are provided up to the audio stages. RF level is monitored at several places throughout the intermediate frequency chain enabling true diversity reception by selection of the strongest signal. A common oscillator chain and common audio stages are used.

A transformer provides balanced microphone level output.

The Dx2020 is powered from 3 DL123A Lithium batteries.