

Radio Repeater Station

A repeater is an automated radio station that extends the range of communications. It consists of a receiver tuned to one frequency and a transmitter tuned to a different frequency, linked together with a controller device. When the receiver receives a signal, the controller activates the transmitter, which then simultaneously retransmits the received signal. To use a repeater, a user's radio is configured to receive on the repeater's transmitting frequency, and when the push-to-talk button is pressed, transmit on the repeater's receiving frequency.

A repeater is usually installed on top of a tall building or on a mountain, and is equipped with an efficient antenna system, so it can receive weak signals and have wide transmission coverage. A repeater can extend the effective communication range of a low-power handheld radio to dozens, or maybe hundreds, of miles.

Repeaters are sometimes linked together to further extend the range of communication. This could be done with wires, or a radio link, a phone connection, or even the Internet using digital audio technology.

