

## Signals for Satellite Radio

The amplitude and frequency modulated signals are detected by the radio receiver, when tuned to that particular frequency, which is then passed through a series of circuits in order to decode and reproduce the original sound. A limiting circuit screens all amplitude variations from the signal while a discriminator circuit converts the frequency variations into the original signal in case of frequency modulator while for amplitude modulated transmissions, it may require specialized circuits as well to filter the unwanted static. Also many frequency modulated stations transmit sub carriers on the carrier, much like the audio signals, with the exception that they are in a frequency range too high to be heard by human ears.

The sub carriers are used to carry weather reports, stock quotes or information about the music being transmitted on the main carrier. Frequency modulated stereo itself relies heavily on the sub carrier to bring about the stereophonic effect. Main audio in Frequency modulated stereo is monophonic, which stops at a frequency of eighteen kilohertz. At frequency of nineteen kilohertz is a pilot signal and there is a special stereo sub carrier centered around thirty eight kilohertz of frequency. The receiving end uses this stereo sub carrier in combination with the mono signal to produce left and right channel audio outputs. The nineteen kilohertz pilot signal is used as a reference so that the receiver can properly recover the special stereo sub carrier lying in the thirty eight kilohertz band.

A device named cassette adapter frequency modulator is available in the market. It is an extremely easy way to connect your portable XM radio or XM Radio receiver to a car's stereo. This particular method can be used in those cars which already have a cassette player installed in them. You can simply plug the cassette adapter plugs into the headphone jack or audio output of your XM radio or receiver and then on the other end, the wired cassette is inserted into your car's cassette player. The radio in car reads audio signals that are sent from the XM radio or receiver through the cassette player instantly giving you XM Radio. These cassette adapters are extremely easy to use and very affordable. But their performance is usually rated as average. Another easy way to enjoy satellite radio is by usage of a wireless FM Modulator.

It is a small device that plugs into any XM Radio receiver, usually through the audio output or headphone jack and sends the audio signal as a radio frequency that is then picked up on your existing car stereo's radio. These wireless FM Modulators work on specific radio frequencies, so both the Wireless FM Modulator and your car's stereo must be both on the same frequency. This little device is powered by a single battery (usually AA or AAA) and can cost also as little. Sound quality for Wireless FM Modulators is usually very good, similar to your FM radio reception.

## About the Author

Tymon Hytem has worked in the electronics field for the past 15 years. He enjoys helping people decide on electronic gadgets from telephones to [XM Radio](#) and choosing the perfect [XM Satellite Radio](#) system for their needs.

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