

21.1: Introduction

Transmission lines are cables that can carry electromagnetic signals from one location to another. This chapter develops a theory using a lumped element approach that describes how the signals are propagated through the transmission line.

In the context of amateur radio, transmission lines are an important part of the overall radio system. Antennas are often mounted in locations remote from the radio to maximize their ability to transmit and receive. As such, it is the transmission line which must carry the signal to or from the antenna, preferably with no reflection and minimal losses. This chapter defines and discusses factors associated with propagation of electromagnetic signals in a transmission line like standing wave ratio. In particular, the chapter discusses the coaxial cable, which is one of the most commonly used transmission lines.

21.1: Introduction is shared under a [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license and was authored, remixed, and/or curated by Ronald Kumon.