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https://www.100test.com/kao_ti2020/120/2021_2022__E5_BE_90_E7_BB_BD2006_c83_120789.htm The Broadcast TV Problem

Conceptually, satellite television is, a lot like broadcast television. It ' s a wireless system for delivering television programming directly to a viewer ' s house. Both broadcast television and satellite stations transmit programming via a radio signal. Broadcast stations use a powerful antenna to transmit radio waves to the surrounding area. Viewers can pick up the signal with a much smaller antenna. The main limitation of broadcast television is range. The radio signals used to broadcast television shoot out from the broadcast antenna in a straight line. In order to receive these signals, you have to be in the direct "line of sight" of the antenna. One problem is that the Earth is curved, so it eventually breaks the signal ' s line of site. The other problem with broadcast television is that the signal is often distorted even in the viewing area. To get a perfectly clear signal like you find on cable, you have to be pretty close to the broadcast antenna without too many obstacles in the way.

The Satellite TV Solution

Satellite television solves the problems of range and distortion by transmitting broadcast signals from satellites orbiting the Earth. Since satellites are high in the sky, there are a lot more customers in the line of site. Satellite television systems transmit and receive radio signals using specialized antennas called satellite dishes. The television satellites are all in geosynchronous orbit, meaning that they stay in one place in the sky relative to the Earth. Each satellite is

launched into space at about 7 , 000 mph (11 , 000 kph) , reaching approximately 22 , 200 miles (35 , 700 km) above the Earth. At this speed and altitude , the satellite will revolve around the planet once every 24 hours the same period of time it takes the Earth to make one full rotation. In other words , the satellite keeps pace with our moving planet exactly. This way , you only have to direct the dish at the satellite once , and from then on it picks up the signal without adjustment , at least when everything works right.

The Overall System Early satellite TV viewers were explorers of sorts. They used their expensive dishes to discover unique programming that wasn ' t necessarily intended for mass audiences. The dish and receiving equipment gave viewers the tools to pick up foreign stations , live feeds between different broadcast stations , NASA activities and a lot of other stuff transmitted using satellites. Some satellite owners still seek out this sort of programming on their own , but today , most satellite TV customers get their programming through a direct broadcast satellite (DBS) provider , such as Direct TV or the Dish Network. The provider selects programs and broadcasts them to subscribers as a set package. Basically , the provider ' s goal is to bring dozens or even hundreds of channels to your television in a form that approximates the competition , cable TV. Unlike earlier programming , the provider ' s broadcast is completely digital , which means it has much better picture and sound quality. Early satellite television was broadcast in C-band radio in the 3.4-gigahertz (GHz) to 7-GHz frequency range. Digital broadcast satellite transmits programming in the Ku

frequency range (12 GHz to 14 GHz) 。 The Programming The Programming Satellite TV providers get programming from two major sources : national turnaround channels (such as HBO , ESPN and CNN) and various local channels (the NBC , CBS , ABC , PBS and Fox affiliates in a particular area) 。 Most of the turnaround channels also provide programming for cable television , and the local channels typically broadcast their programming over the airwaves. Turnaround channels usually have a distribution center that beams their programming to a geostationary satellite. The broadcast center uses large satellite dishes to pick up these analog and digital signals from several sources. 100Test 下载频道开通 , 各类考试题目直接下载。 详细请访问 www.100test.com