

徐绽2006年新四级考试阅读讲义8(4) PDF转换可能丢失图片或格式，建议阅读原文

[https://www.100test.com/kao\\_ti2020/120/2021\\_2022\\_\\_E5\\_BE\\_90\\_E7\\_BB\\_BD2006\\_c83\\_120790.htm](https://www.100test.com/kao_ti2020/120/2021_2022__E5_BE_90_E7_BB_BD2006_c83_120790.htm) The broadcast center converts all of this programming into a high-quality , uncompressed digital stream. At this point , the stream contains a vast quantity of data about 270 megabits per second ( Mbps ) for each channel. In order to transmit the signal from there , the broadcast center has to compress it. Otherwise , it would be too big for the satellite to handle. Compression , Encryption and Transmission The two major providers in the United States use the MPEG-2 compressed video format the same format used to store movies on DVDs. With MPEG-2 compression , the provider can reduce the 270-Mbps stream to about 5 or 10 Mbps ( depending on the type of programming ) 。 This is the crucial step that has made DBS service a success. With digital compression , a typical satellite can transmit about 200 channels. Without digital compression , it can transmit about 30 channels. At the broadcast center , the high-quality digital stream of video goes through an MPEG-2 encoder , which converts the programming to MPEG-2 video of the correct size and format for the satellite receiver in your house. After the video is compressed , the provider needs to encrypt it in order to keep people from accessing it for free. Encryption scrambles the digital data in such a way that it can only be decrypted ( converted back into usable data ) if the receiver has the correct decryption algorithm and security keys. Once the signal is compressed and encrypted , the broadcast

center beams it directly to one of its satellites. The satellite picks up the signal with an onboard dish , amplifies the signal and uses another dish to beam the signal back to the Earth , where viewers can pick it up. The Dish and the Receiver A satellite dish is just a special kind of antenna designed to focus on a specific broadcast source. The standard dish consists of a parabolic ( bowl-shaped ) surface and a central feed horn. To transmit a signal , a controller sends it through the horn , and the dish focuses the signal into a relatively narrow beam. The end component in the entire satellite TV system is the receiver. The receiver has four essential jobs : 。 It de-scrambles the encrypted signal. In order to unlock the signal , the receiver needs the proper decoder chip for that programming package. 。 It takes the digital MPEG-2 signal and converts it into an analog format that a standard television can recognize. In the United States , receivers convert the digital signal to the analog NTSC format. Some dish and receiver setups can also output an HDTV signal. 。 It extracts the individual channels from the larger satellite signal. When you change the channel on the receiver , it sends just the signal for that channel to your TV. 。 It keeps track of pay-per-view programs and periodically phones a computer at the provider ' s headquarters to communicate billing information. While digital broadcast satellite service is still lacking some of the basic features of conventional cable ( the ability to easily split signals between different TVs and VCRs , for example ) , its high-quality picture , varied programming 0selection and extended service areas make it a good alternative for some. With the rise of digital cable ,

which also has improved picture quality and extended channel selection , the TV war is really heating up. 1. If the Earth were perfectly flat , people might have never invented satellite television. 2. The television satellites stay in geosynchronous orbit and keep pace with the earth. 3. In recent years , satellite television has started to be broadcast in the radio frequency range between 12 GHz and 14 GHz. 4. Local television channels usually use satellites to transmit their programming. 5. Satellite television providers can bring dozens or even hundreds of channels to TV viewers because the television signal sent to satellites are compressed. 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](http://www.100test.com)