**The most important factors of the conference system: sound reliability and sound quality**

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With the development of the times, people are increasingly pursuing high-level and high-quality. In the past, the listening and understanding in the sound system can no longer meet the requirements, and high-fidelity restoration is the pursuit of today!

Psychoacoustics tells us that people's perception and appreciation of sound has a development process from low to high, from perceptual to rational. The listener gradually establishes the outer image and inner image of the sound in the process of perceiving sound effects. The perception of the image unconsciously affects people's thinking and judgment of the voice. The superficial image gives the listener a stimulus, and the inner feeling gives the person an emotional change. "This is the connotation of psychology.

A set of electroacoustic systems, for music or program sources or artists to do is to restore! The electroacoustic system should be like an optical mirror with good transparency, only amplification, no sound and distortion, and respect for the speaker's voice.

Tones, tones and loudness are called the three elements of sound. In order to illustrate the application of psychoacoustics in modern high-level conference systems, we emphasize that the loudness of sound is the perception of the size of the human ear, and the amplitude of the sound wave determines the loudness. The frequency of the fundamental wave determines the level of the pitch. The tone depends on the structure of the harmonics. The above three elements are the criteria for determining whether the speaker of the conference room is excellent.

Let's start by choosing the frequency response characteristics of the microphone:

The frequency response characteristics of condenser microphones are neutral (referring to objective reality), clean, no distortion, and high sensitivity. The moving-frequency microphone frequency response characteristic is deep and warm, but lacks neutral (true feeling). The sound that he picks up is not clean and the intermediate frequency is easy to dye. It is suitable for picking up music, so the conference system generally uses high-quality capacitors. Conference microphone.

The human voice is mainly caused by the vibration of the vocal cords. The language is characterized by intermittent and transient, and its pitch and timbre are determined by the fundamental frequency of the language itself and the harmonics. The density of sound energy in Chinese is generally concentrated. Distributed between 200Hz-700Hz, the male vocal cord is longer and thicker (that is, the structure of the sound source itself), the pronunciation frequency is lower, and the average basic frequency (the pitch-male bass average) is about 230Hz (bass singer fundamental frequency) Can be as low as 60Kz soprano base frequency can be as high as 1000Hz) and the harmonic frequency generated by the language sound can reach more than 6000Hz, the sound pressure level is 60-70dB, dynamic 80dB.

The characteristics of Chinese, the tone is undulating, the waves are undulating, and the logical accent changes greatly. Often, a good poem is always catchy, rhythm is melodious, powerful, and rhythm is clear. Chinese sentences, accent, tone, rhythm, to analyze the speaker's pronunciation characteristics, but also to analyze the frequency, adjust the voice with high and low frequency, get the best sense of hearing. Chinese voice, because of the different sound belts, the gap between men and women is greater There is a difference between men and men, between women and women. The pronunciation energy of Chinese is concentrated at 200Hz-700Hz, which is a medium-low frequency. Therefore, pay attention to the thickness of the male voice, pay attention to the female voice, and do not mix the low frequency. The intermediate frequency is not hard, the high frequency is not sharp, giving people a feeling of fullness, brightness and naturalness.

It is analyzed that the peaks in the low frequency band and the small peaks in the high frequency band can produce sweetness, intimacy and warmth, and the decrease of the low frequency band and the reduction of the high frequency band will evoke the loudness, distance and penetration of the sound. Argumentation is the mapping of psychology to modern audio technology.

In 1973, American Hamm proposed a new argument "when the second harmonic of music is octave higher than the fundamental wave, it can make the sound more rich."

As far as language is concerned, the position, phase, intensity and number of peaks of each person's spectrum are closely related to the speaker's vocal tone. If the number of peaks in the spectrum of the language is large, the positions of the peaks are arranged in an orderly manner. Then, this kind of voice will be particularly pleasant in subjective hearing. We need to correct and compensate the tone of every important speaker, so that the voices of all the participants are beautiful, warm and friendly, so that the male and female voices, the loud voice and the small voice are suitable. Adjust so that everyone doesn't speak the same size at the meeting, making people feel uncomfortable.

Therefore, in order to make an ideal conference listening environment, it is essential that each pickup must be able to adjust the volume and tone separately.