**Construction of public address system**

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1. Construction basis

The construction requirements of the public broadcasting system shall be in accordance with the National Standard of the People's Republic of China, "Code for Construction and Acceptance of Installation of Electrical Installations" (GB50258-96), Safety Industry Standards of the People's Republic of China, "Safety Precautions and Requirements" (GAT75-94), The requirements for the construction and acceptance of electrical installation engineering (GBJ232-90, 92) and the design drawings of the public broadcasting system are required.

2. Construction quality requirements

On-site construction quality is directly related to whether the project can meet the design requirements and user requirements. Therefore, it must be constructed in strict accordance with the design plan, construction according to standards, no rework, no work, and a construction log according to regulations.

The main points should be noted in the following aspects:

First: cable selection and laying

Transmission cable for public address system: The room service broadcast line should use copper core multi-core cable or copper core plastic stranded wire, and other broadcast lines should adopt steel core plastic stranded wire. Various program signal connection cables should be connected with four-core metal shielded strands, diagonally connected to prevent interference. The signal connections between all devices are balanced and the ends are soldered. If the system has a fire accident broadcast function, a flame-retardant copper core cable or a refractory copper core wire cable should be used. The laying method of the line is to be laid by steel pipe or wire trough. Generally, it should not be laid with the lighting and power lines in the same line slot. The fire accident broadcast line should adopt fire protection measures. The bending radius of the cable is not less than 15 times the diameter of the cable. The power cable should be laid separately from the signal cable and control cable. The cable length should be checked on a disk-by-disk basis, and the cable should be selected according to the length of each segment on the design drawing to avoid the connection of the cable. When the cable must be connected, a special connector should be used, and a proper margin should be left at both ends of the cable to be laid, and an obvious permanent mark should be marked.

Second: the connection between the speaker and the broadcast line

When connecting the playback device, pay special attention to the uniformity of the phase between the speakers and the broadcast line. Otherwise, the phase of the sound between the speakers may interfere, resulting in a large difference in sound pressure levels between the points. The serious consequences of the ups and downs of the hall sound, so the construction of the line must be strictly unified line marking, and a unified connection method. Integrate various sound construction requirements and combine the actual effects in the project.

In the public address system, there are mainly three speaker connection methods:

? Twisting law: the bus line and the speaker lead end are stripped off the outer skin, and each stripping head is divided into two strands and then twisted together, wrapped with tape or clamped with a plastic sleeve clamp. This method is simple and easy to construct, but it is easy to cause problems over time.

· The speaker introduction end is the connection socket. Simply peel the broadcast wire end into the crimping slot and tighten the crimping screw. This method is currently more common.

·Welding method: the outer skin is peeled off at the lead end, soldered after soldering, and wrapped with tape. This method is cumbersome, but has good reliability and is suitable for use in environments requiring high or humid conditions.

The above three connection methods are subject to the specific circumstances and the requirements of Party A. In either case, tinned wires are used to facilitate soldering and to avoid moisture or rust after a long period of time. If it is required to expose the connecting wire from the junction box to the speaker end, it should be protected by PVC threaded pipe or iron snake skin.

Third: system grounding

The broadcast control room should be provided with protective ground and working ground. In order to reduce the impact of the power supply system on the broadcast audio system, the protective ground and working ground should be set separately. The recommended practice is to lay a copper strip in the weak and vertical shafts as the working ground of the weak current system and the protective grounding of the high-power system, so that the weak current system can work better. Since this method is grounded at the time of access to the earth, the total grounding resistance must not be greater than 1 Ω.

3. Construction inspection

Because the entire system of the broadcasting project involves more connection points and connectors, it is also possible to make mistakes for individual reasons during installation, so careful inspection is necessary. General inspections include equipment installation safety checks, proper inspection of power supply lines, and correct connection of connectors. Another important check item is to carefully check whether the status setting of each piece of equipment meets the design requirements. In particular, some speakers have an impedance matching switch. After connecting the broadcast line, be sure to confirm that the switch is placed correctly. In the position, this point must not be forgotten, otherwise it will easily cause equipment damage. These states also include whether the output selection switch of each signal source device is correct; whether the function button of the signal processing device is proper; whether the bridge switch is set when the power is placed on the bridge request; whether the power selection switch of each device is set to 220V or the like. After the above construction steps are all confirmed, the equipment should be ready for commissioning.