



To All Prospective Users of Audio and Video Equipment:

The Boettcher Mansion is located on Lookout Mountain near several radio, television, and microwave transmission towers. These towers transmit radio and microwave signals powerful enough to serve most of the Front Range area population and can cause interference such as a hum, buzz, or static in audio and video equipment used here. Some DJs have experienced extreme interference and have been unable to project sound; however, the majority of equipment does work well here. Each sound system is unique as to what enhancement might work best. You may arrange a practice session for your musicians to test equipment. The acoustics are excellent in the Fireside Room. Consider live, non-amplified music for best results, but should you choose amplification, consider these suggestions from various sound technicians.

**Audio Equipment:** Quality Mobile Sound Inc. has worked at the Boettcher Mansion for the past twelve years and has compiled the following information and testing advice to help with the interference problems incurred at the Mansion from the nearby radio tower transmissions.

High-end equipment is imperative at the Mansion, as lower-end equipment often results in unsatisfactory performances. Because VHF microphones don't usually work at all, we recommend using UHF microphones only. As there are many hot and cold spots in the Fireside Room, interference can fluctuate from event to event. It is best to maintain all wiring below three feet from the ground, due to the fact that most interference happens above this level. Interference is also a problem when there are levels of high humidity and/or heavy cloud cover.

There are several things that can remediate the interference. First, lower the gains on your amplifier to the lowest level and raise the volume of your mixing board to the highest level. Maintain short lengths of cables for all equipment in order to eliminate excess cables acting as antenna. Insulating cables with aluminum foil can provide shielding and a means to ground outside signals. Commercially insulated cables are highly recommended such as Monster Cable 500 series (or greater). Another method to eliminate interference is to reverse the polarity by reversing the ac plug. Magnetic recorded media (i.e., video/audio cassette tapes) will enhance interference, therefore use of compact discs is highly recommended.

**Video Equipment:** Some equipment has built in copper shields that protect from interference. Try aluminum foil as it also can act as an insulator. Try using video monitors instead of television sets. Video monitors do not have television tuners in them and will enable you to use the video and audio output jacks instead of the RF (radio frequency) antenna connections. The direct video and audio source outputs work at frequencies far away from the standard TV channels, making it highly unlikely for local interference. Try locating equipment in front of the fireplace. See tips listed above, such as short cable lengths, equipment height and position in the room.

**Rental Equipment:** The Mansion does not furnish video equipment, but can provide some audio equipment and a microphone for an additional fee. You can arrange directly with an AV rental business to deliver. Please specify immediate removal/pick-up at the end of your event. The Mansion is not responsible for any equipment left here.

**Please feel free to call the Mansion (720-497-7630) or Ken Hiatt at Quality Mobile Sound (303-682-5242) for additional tips and information. Quality Mobile Sound also offers equipment rental and/or services if needed for your event.**

Rev: 1/30/09