



## **We Give You Peace of Mind**

Calhoun Communications, Inc. is a company that is built around serving you. From the entire Calhoun family, the engineers, technicians and staff we work with that foundational philosophy. For over 20 Years we have done just that, "serve you". Whether you have broadcast facilities or a need to setup remote or on-site office systems, we provide all the expertise from off-site large-scale engineering services, to setting up a small office.

**Consulting, Planning, Engineering, Testing,  
Equipment Sales & Leasing and Installations**

Ask us if we do it, invariably the answer will be "Yes"!



## **Company Profile**

Calhoun Communications, Inc. was incorporated in 1986 as a Radio Broadcast consulting and contracting firm. In 1986, Gerald started Calhoun Communication, Inc. as a Contract Engineering Firm for AM and FM radio Stations.

The primary source of revenue was services offered to small and medium market broadcast facilities that did not have or was very limited engineering staff. This business grew rapidly requiring the addition of two full time engineers.

Over the years many AM and FM studio and transmitter facilities were designed and installed by Calhoun Communications Inc. In 1999, the company pursued High Speed Wireless Networking. Calhoun Communications, Inc. installed and maintained several large Wireless Networks. In 2004, the company entered into the HDTV and IBOC areas of broadcasting. Presently, the staff of Calhoun Communications, Inc. employs nine engineers and technicians.



705 Douglas St. Ste 540 • P.O. Box 3064 • Sioux City, Iowa 51102  
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## **Calhoun Communications, Inc. Officers**

### **Gerald (Cal) Calhoun, President**

Mr. Calhoun started his career in electronics while still in high school. He worked part time as a TV repairman until graduating from Morningside College. He then enlisted in the Air Force and was a telecommunications expert working on Aeronautical Radio and Radar systems.



After 16 years in the service, he returned to Sioux City, Iowa and assisted in building KMEG-TV studios and transmitter facilities. He designed and built KBCM, KWIT, KTPR, and KIWR FM Radio Stations studios and transmitter facilities.

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### **Tony Carpenter, Vice President**

Mr. Carpenter actually began his Telecommunications career in elementary school. Helping Gerald at that time with a TV repair shop and also light tower construction. After graduating from Western Iowa Technical College, Tony was employed by Calhoun Communications as a Field Service Engineer. His primary duties included troubleshooting and repair of the AM and FM transmitters, troubleshooting and repair of the RF transmission systems. Tony designed and installed many AM and FM studio and transmitter facilities. He has assisted in installing many tower structures over the years. In 2002 Mr. Carpenter became Vice President and General Manager of the company.



### **Norma Calhoun, Secretary**

Norma Calhoun is the wife of Gerald Calhoun. She has organized and maintained the book keeping of Calhoun Communications, Inc. since 1986.



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## Services Offered

### AM, FM, and IBOC Radio Services

- ❑ IBOC Digital Implementation
- ❑ RF Equipment Performance Measurements (Occupied Bandwidth)
- ❑ AM Equipment Performance Measurements (NRSC-2 RF Mask, including required harmonic/spurious measurements)
- ❑ Audio Proofs or Composite Spectrum Analysis (AM and FM)
- ❑ FCC FM Form 302 Measurements and Preparation.
- ❑ Studio/Transmitter /Antenna Troubleshooting and Repair.
- ❑ Facilities Upgrade or New Installation Projects (Turnkey or Assistance)
- ❑ Scheduled Transmitter Site Inspections
- ❑ 24/7 Emergency Service
- ❑ FM Antenna Sweeps
- ❑ Cable Fault Location

### Radio Broadcast Systems Highlights

- Designed and installed many broadcast studio, transmitter, and tower facilities.
- Contracted by Data Transmission Network to design, install, and maintain fifty-three sites for a data distribution network using FM subcarrier technology.
- Installed an "all digital" Radio studio facility in Budapest, Hungary.
- Contracted by Harris Broadcasting Corporation to perform a frequency change on several FM transmitters and antennas in Jamaica.
- Contracted by the FCC as a consultant for frequency allocation and interference issues.
- Supervised numerous transmitter building and tower installations.
- Designed and supervised installations of highly directional antenna systems for FM broadcast which includes specific tower design in large market cities across the US.
- Performed field tuning of transmit antennas in the FM and TV areas using the Network Analyzer.
- Performed antenna and line sweeps using the Network analyzer.
- Performed Spurious and Harmonic testing using the Spectrum Analyzer.



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- Contracted by Applied Micro Electronics to aid in the design of the "Channel-Cat" FM subcarrier generator.
- Repaired and rebuilt high-powered FM transmit antennas.
- Installed numerous Folded unipole antenna systems on AM towers.
- Installed several IBOC facilities.
- Provided Harris Broadcasting Corporation commission with multiple IBOC facilities.
- Owned and operated an AM/FM broadcast facility in Tremonton, Utah.

### **Television Broadcast Systems and Services**

- Assisted in the installation and helped maintained two television studios and transmitter facilities.
- Performed TV antenna and diplexer lines sweeps and tuning
- Performed a variety of signal strength measurements for broadcast radio and television, as well as Satellite TV and Cellular telephone.

**Note:**

HD Radio is in the process of being implemented. The personnel from Calhoun Communications, Inc. have attended several HD Radio Engineering schools to get certified in the installation and commissioning of these systems. As noted in the highlights, Calhoun Communications, Inc. has installed several turnkey IBOC installations. Calhoun Communications, Inc. has the proper test equipment that is needed to install and test these systems.

### **Wireless LAN Systems and Services**

- Navini Certified
- Redline Certified
- Dragonwave Certified
- Orthogon Certified
- Alcatel Certified
- Proxim Certified
- Proxim Platinum Vendor
- Wave Rider Certified
- Alvarion Certified
- Fortinet Certified
- Cisco Certified



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- ❑ CommScope Connector Certified
- ❑ Andrew Connector Certified
- ❑ Andrew Antenna Installer Certified
- ❑ ComTIA A+ Certified
- ❑ Motorola Authorized Solutions Provider
- ❑ Exalt Communications Elite Partner

### **Wireless LAN Systems Highlights**

- Contracted by DTN Speed Net to design and install a one hundred forty five city Wireless ISP network infrastructure using point to point and point to multipoint technology in the 900 MHz, 2.4 GHz, and 5.8 GHz band.
- Performed over three hundred site surveys for High-speed wireless networks.
- Contracted to design, install, and maintain a forty-three remote site wireless network for the City of Sioux City. This incorporated point to point as well as point to multipoint in the 2.4 GHz and 5.8, GHz.
- Designed, installed, and maintain a variety of wireless WAN systems for school districts, utility companies, and private enterprise.
- Design of City Wide Wireless Network for the City of Sioux Falls, South Dakota.
- Designed a Digital Content Delivery System using Wireless technology for the backhaul and Infrastructure for the Mall of America.
- Installed several 900 MHz WISP system for Motorola.

### **Commercial Projects Highlights**

- Performed a variety of signal strength measurements for broadcast radio and television, as well as Satellite TV and Cellular telephone.
- Contracted to perform a frequency change for point-to-point microwave hops for two utility companies in Minnesota.
- Rebuilt a HF antenna farm on the Hawaiian island of Molokai to be used by commercial air traffic control.
- Installation of an Air Traffic Control radio system in Far East Russia for the Russian ATC. These sites were installed on mountaintops using solar with battery backup for power.



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