First Presbyterian Church  
New Bern, NC

**LOCATION:** 418 New Street, New Bern, NC 28563

**SCOPE OF CONSULTING:** Speech-reinforcement sound system design and general room acoustics

**COMPLETION DATE:** Designed 2001 / Installed 2002

**REFERENCES:** Hill Hendricks, church member and project manger (office: 252-466-4733)  
Dr. Harold Vandersea, church member and sound system committee chair (office: 252-638-8115)

**DESCRIPTION:** New speech-reinforcement sound system for an exquisite 1822 church sanctuary in the New England colonial style. The 2-second reverberation time has made intelligible speech difficult to achieve over the years, with results largely dependent on the vocal skills of the ministers and readers. Nevertheless, the church had not previously considered a sanctuary sound system. The natural, lively acoustics provide excellent support of a fine pipe organ by C.B. Fisk (1986) and the church’s choral program, but hinder the spoken word for all but the best public speakers.

We were given the daunting task of designing the very first sound system for this venerable building—our goal was to provide subtle speech-reinforcement using components which would have the least visual impact on the elegant and refined sanctuary, and at the same time causing the least disruption of this historic structure. Digitally-controlled, steerable line-array loudspeakers were recommended as the best of several possible loudspeaker designs, and selected by the church as the most cost-effective and least intrusive solution.

Two 9’-tall medium-resolution line-array loudspeakers for the main floor plus two 2’-tall low-resolution line-arrays for the balcony are surface-mounted on the front sanctuary wall, and are currently undecorated except for custom-matched paint. We strongly advocated a decorative scheme to help blend the loudspeakers into the architectural fabric of the sanctuary, but unfortunately this work has thus far been deferred. Other sound system features include a “hands-free” mixing system for worship services, assisted-listening system for the hearing impaired, modest speech & music recording system for archive use or cassette tape distribution to the home-bound, permanent wiring for future professional recording, and preparation for future program monitor loudspeakers to cover ancillary & support areas in adjacent buildings.

Acoustics advice included consideration of existing materials and finishes, but most-importantly provided the congregation with guidance in reducing noise from a poorly-designed and unfortunately very-noisy HVAC system located in the sanctuary undercroft.
SANCTUARY AND HIGH PULPIT – VIEW FROM REAR BALCONY