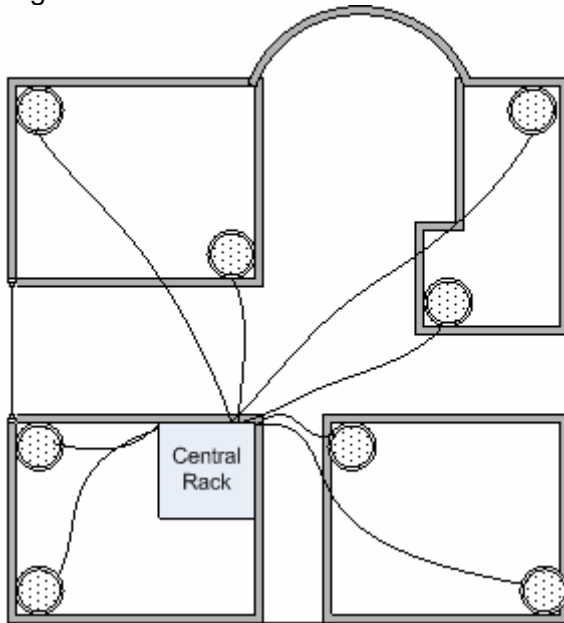


## Distributed Amplification

One of the worst things that can happen in a distributed audio environment is sound degradation. Why does this happen when you've just invested in a \$5,000 tuner and a mega amp?

The reasons are varied. First, in a traditional distributed audio environment, sources and other devices are stored in a central rack typically in a closet or basement and away from view (see Figure 1).

Figure 1



Several problems arise from this type of distribution:

- Cable must be run (sometimes great distances) to feed the speakers. Additional amps may also be needed to boost the signal so that sound quality at the speakers is within tolerance.
- If you have a CD you want to place in a player, you have to walk to the rack location to insert it.
- Analog audio signals routed to these speakers does not reproduce sounds exactly; whereas, digital signals do. Analog signals are also subject to interference.

## How does *NetStreams* solve these problems?

We decentralize the basic building blocks of a distributed audio system and push them to the edge of the network. This means our devices are within easy reach of room speakers. This is important when considering that the shorter the cable run from the amp to the speaker, the greater the overall sound quality. Longer cable runs have the opposite effect. All *NetStreams* systems are designed with the shortest speaker cabling length in the industry.

Any audio system will have the following basic components:

- Source – analog and digital
- Pre-Amp – analog and digital
- Amp – analog and digital
- Output (speakers or headphones) – analog

See Figure 2.

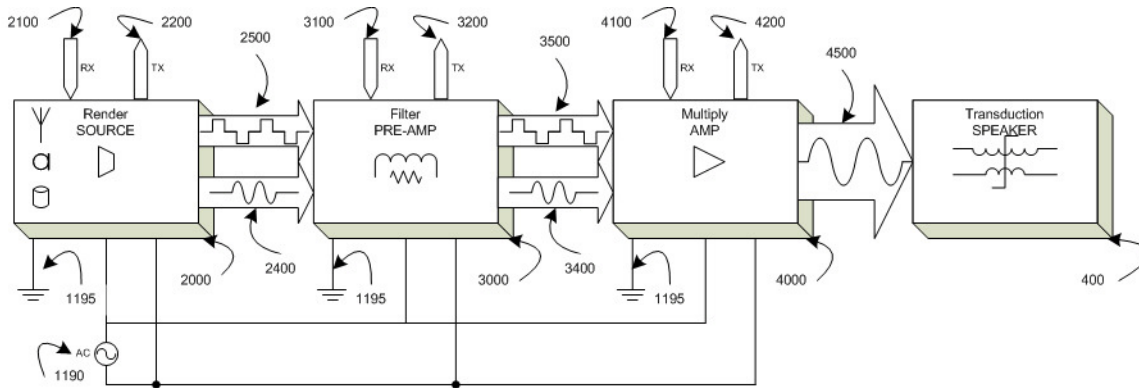
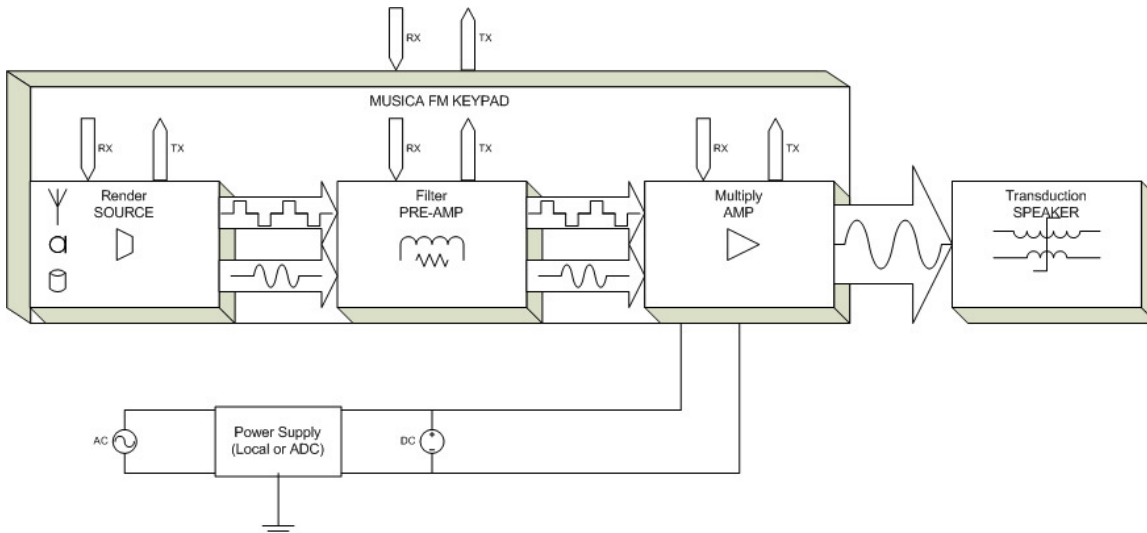


Figure 2.

Using our patent-pending technology, we have combined all of these features on one *Musica™* KP50 keypad (see Figure 3) or one *SpeakerLinX™* IP-Based Amplifier / Room controller (with the exception of the FM tuner in that case).

Figure 3.



No longer are these basic components centralized in a basement or closet. With *NetStreams*, you actually have everything in the zone that you need for a perfect listening environment.

## What does this mean for the consumer?

- By pushing our technology to the edge of the network, we've eliminated the need for costly matrix switching and large central amplification. Both are required to push analog signals great distances to the speakers.
- Sources can either be placed in a central cabinet or at the zone where the keypad and speakers are located. This is especially important for portable devices such as MP3 players. You can easily add powered subwoofers or more speakers (something that centrally-based systems do not facilitate).
- When running speaker wire to the speakers, analog signals endure great signal loss and are susceptible to an ever-increasing barrage of interference. This creates distortion and reduces overall sound quality. With the *NetStreams Musica* or *DigiLinX*™ systems featuring the amplifier installed in the zone, you greatly reduce your risk for higher distortion (see Figure 4).

Figure 4.

