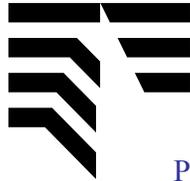


Specialized Hearing Systems in the Church

HORIZON AUDIO SERVICES LTD.

Specialized hearing systems are those which are used specifically by people who have hearing impairments. The average age of a congregation in the



perceived need for a specialized system increases. It is important to note that the church should first ensure their general sound system is working properly before they invest in a specialized system.

When a church's general system is performing properly (providing intelligibility of about 8% ALCONS maximum; that is 8% articulation loss of consonants of speech), those in the congregation who have functional hearing ability ranging from normal to moderately impaired will be satisfied. (Function hearing ability refers to hearing performance with a properly operating recommended hearing aid, if appropriate.) Even some folks with serious impairment will be able to hear reasonably well depending on the nature of the impairment and the hearing aid they have. The only people who will still have problems hearing are those who have more than intermediate impairment. Currently, the percentage of these people in the average congregation is typically reasonably low, but will continue to rise as the population ages.

A specialized audio system provides further improvement above that possible with a general system in the areas of direct to reverberant sound ratio, loudness control, and limiting interfering sound (noise from adjacent people and room reverberation).

Horizon Audio Services Ltd., 1069 Clarke R.

Phone: (519) 453-3368 or (800) 698-8796 Fax: (519) 453-04

Hardwired – where headphones are plugged in to appropriately located boxes.

Inductive Loop – where a magnetic field generated by an amplifier driving a wire loop about the room is picked up by a small receiver.

FM Radio Transmission – where a small FM transmitter radiates radio waves to small receivers.

Infra Red Light Transmission – where a light radiator floods the room with infra red light which is picked up by a headphone type receiver.

All systems have their advantages and disadvantages. Hardwired systems are expensive to install and limit the locations where the user can sit. Inductive loop systems are expensive to install and typically do not provide a very even magnetic field. FM systems can, on occasion, be subject to radio transmission noise and frequency use clashes with other radio spectrum users. Infra Red Light systems are expensive and can exhibit fading in certain areas of the sanctuary if natural light levels are high or if obstructions block the receiver from the light emitter. Also, infra red light will not pass through walls, whereas FM radio

signals will.

All things considered, our opinion is that FM systems offer the best compromise between cost, performance, quality, dependability and long-term value for the church.

Remember that FM radio waves can be received anywhere in the church facility, even down the

street a block or so, which means the user, has the freedom to leave the sanctuary and still hear the service. The leading infra red system, from Sennheiser, is typically four to five times the cost of a good FM system for the same number of receivers.

Over the years **Horizon Audio** has used, sold, or considered four major brands of FM systems. We settled on the Telex® SoundMate™ as the best value system. Telex® offers the SoundMate™ System on a variety of frequencies in the 72 to 75 MHz band, which in the US is specifically set aside for hearing enhancement, and in Canada is set aside but not exclusively for this use. After having installed many Telex® systems over the past several years, we have yet to change a system due to a frequency interference problem. One system is in downtown Toronto, and has remained interference free.

The Telex® SoundMate™ System offers a wide frequency response for clean, clear, natural sound quality. The response is good enough that we have used the SoundMate™ System as the transmission system for various music events, such as various regional March for Jesus events. It can also be used to transmit a signal to portable

video cameras.



Telex® backs the SoundMate™ System with a full three year warranty. If service becomes necessary, it is performed in Ontario by an authorized service centre for Telex®.

Telex® offers a variety of earpieces with their receivers. The standard is the single earbud. Also available is a dual earbud, a personal stereo style headset, high output earpieces for the profoundly hearing impaired, and a neck loop, to use with hearing aids that incorporate a telephone coil.

Telex® also offers accessories, such as a remotely locatable antenna for the transmitter, allowing the transmitter to be located in a rack or cabinet, while the antenna is in an ideal location. A multi unit charger/organizer case for the receivers is another accessory. This unit includes a NiCad battery charger that charges receiver batteries through the earpiece jack on the receiver.

Another feature of the Telex® transmitter is its balanced audio input with selectable sensitivity. This allows you to feed it with a microphone level, line level, or 70 volt level signal. This means you can take the system to another room in your church, or out to a senior's facility for example, plug a microphone into it, and satisfy those

hearing impaired even when you don't have a general sound system to use.

Telex® is a major US manufacturer, long established in the field of wireless products for the professional, institutional and military markets. We have found Telex® products to be of uniformly high quality. We also use Telex® wireless microphones in our church installations.

If you have questions not answered here, please feel free to call or email us.

We will be pleased to set up a SoundMate™ demonstration system for you in your church. This is one instance where hearing truly is believing!

Thank you!

ORIGINALLY COMPOSED BY DAVID WETTLAUFER
FOR HORIZON AUDIO SERVICES LTD

Date: unknown

Copyright 2009 Horizon Solutions