CloseTalk CONFERENCE SYSTEM

Wireless conference and voting system using infrared light

Why a conference system?

Almost everything in the world today requires communication. Most is handled by informal coffee room meetings, telephone, e-mail, text messages, Twitter, Facebook and other meeting places who are all great tools but not without drawbacks, they are usually of a person-to-person-only communication and mass publishing nature.

For larger, longer in time, and more dynamic and personal meetings with more than two, three participants, the problem of meeting order, audibility and documentation immediately becomes apparent. A conference system provides everyone with their own microphone and speaker and also creates a personal space for papers and tools needed for the meeting without sacrificing the ability to hear and be heard.

In times where traditional conference travelling becomes increasingly less attractive due to rising cost- and climate awareness, the use of telephone and video conferencing is a very powerful alternative. The common use of traditional "table top" teleconferencing equipment has serious problems with audibility, even with low numbers of participants. A conference system provides the solution!

Why wireless?

Much of today's sound- and video technology is connected using cables which is a simple but very inflexible method. Even the "conference system" technology segment is divided into wired and wireless segments. Wired conference systems are primarily intended for fixed mounted and dedicated use such as parliaments.

Using a wireless conference system is ideal for room area re-use. Set a conference in minutes in the morning and take it down just as fast when the meeting is over, instantly making the room available for other use.

A wireless conference system simply provides ***flexibility***!

A conference system:

- ✔ Increases audibility dramatically
- ✔ Increases meeting order and flexibility
- ✔ Provides easy means for recording and archiving
- ✔ Is ideal as a "real" teleconferencing system
- ✔ Gives more people easy access to meetings and discussions
- ✔ Is ideal for formal meetings and functions such as state, councils, health councils and courts
- ✔ Lowers organisation costs with reduced travelling and other "dead time"
- ✔ Creates the possibility for "super video conference", i.e. video conference for large numbers of participants

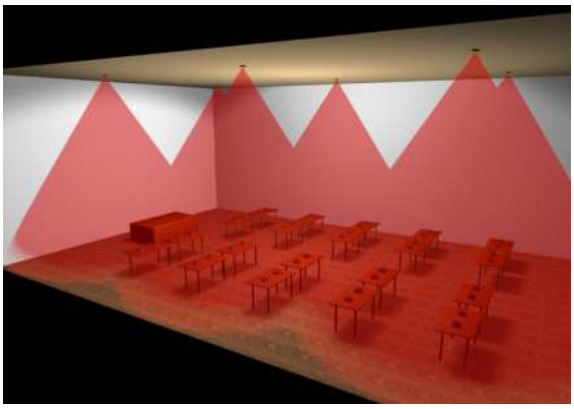
Why infrared light and not radio?

Most of the wireless conference systems of today use radio which, on paper, may look like an attractive solution but that in reality is only an advantage for the installer firm. Radio based systems use so called "2.4GHz technology" which in reality means they are constructed and *competing* with resources of technologies like wireless networking and internet, Bluetooth, remote controls, etc. This means that radio based conference systems are experiencing increasing problems with ether congestion, especially in larger cities. Who wants to make a major technology investment that may experience instability because the neighbour installs a large Wi-Fi system!?

Older infrared systems experienced problems with fluorescent and low energy lamps but by using modern LED-technology *Close Talk Conference System* is totally reliable.

Advantages with infrared light:

- ✔ Totally secure against eavesdropping
- ✔ Will not interfere with other wireless systems and technologies
- ✔ Easy to install and maintain
- ✔ Financially sound investment, infrared light does not have any "frequency ranges" that may become interfered with or sold for other use in the future, making a radio system unusable
- ✔ IR-light levels are low and safe for humans and other systems such as remote controls



Principle for communication using infrared light

A common question for infrared systems is stability. Infrared light depends on free line of sight, i.e. if you cover the beam, the signal is broken. This is solved by *redundancy*, i.e. that several receivers sees the signal together. Another common question is about interference from displays and video projectors. Plasma displays should be avoided in the same room, this is a general rule for all IR-system and not specific for *Close Talk Conference System*. Video projectors, LCD- and LED displays are perfectly fine to use. Finally, the system should not be used in direct sunlight since it contains powerful IR light.

The basic system

The basic components for an audio-only system is shown below. The system consists of a number of ***Delegate Units***, one ***Central Unit***, one or more ***Transceivers*** with cabling and finally a battery charger solution. There are three mounting variants available for the transceiver, surface mounting by screw, flush mounting by spring and flush mounting by screw fastening. The transceivers are designed to be non-intrusive with their neutral white colour and blends with most ceiling types. Other colours are available on special order. *Close Talk Conference System* works with ceiling heights up to seven metres, in special cases even higher.

There are two alternatives available for battery charging, the cord charger ***DC-110-45*** that supports five units per charger and a combined transport and charger trolley ***CT-10*** that supports up to twenty four units per trolley.

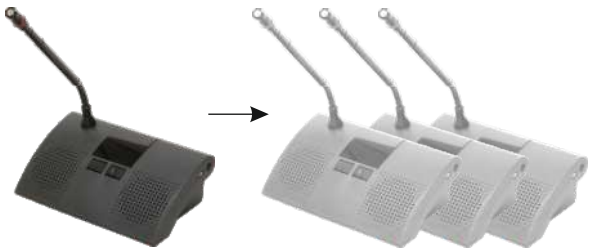
The transceiver is mounted face-down in the ceiling, directed towards the delegate units and is connected to the central unit using industry standard ***S-STP Cat. 6 Ethernet*** cables. The transceiver works like an antenna for the signals to and from the delegate units, one or more transceivers are used to support the desired area of operation.

The system supports an unlimited number of delegate units with a maximum of three active microphones at one time. There is no special chairman unit, any unit can be promoted to chairman functionality by settings in the central unit. Audibility can be further increased by connecting the system to an external PA.

Telephone conference

By adding a ***telephone hybrid*** to the basic system you get a high class telephone conference system. The *Close Talk Conference System* product range does not contain any telephone hybrid, instead most of the world markets professional hybrids are supported via the central unit audio ports.

Basic conference system components:



Delegate Unit DU-111-02

Transceiver TU-100-02, -03 or -04

Central Unit CU-110-11

Cord Charger DC-110-45

or

Charger Trolley CT-10

Formal conferencing, voting and PC-support

By adding the PC-software ***Close Talk Control***, the conference system functionality is expanded dramatically. *Close Talk Control* contains functionality such as ***speaker list control***, ***person databases***, ***audio control***, ***attendance and fee management*** and much more. *Close Talk Control* has been developed in close co-operation with state and municipal organisations and is the markets most competent software for formal conferences.

Using *Close Talk Control*, *Close Talk Conference System* becomes a powerful ***voting system***. Voting is done using the existing delegate unit buttons and the result can be presented on displays, printed and archived electronically.

The conference control functionality includes full ***speaker- and reply list control***, full control of all microphones including platform functionality.

The functionality for *attendance and fee management* includes tools for easy management of the conference participants with comprehensive ***time- and fee reports***. Support for ***automatic attendance*** via ID-card is also available.

Other functions include ***battery level control*** for the delegate units, system control, ***database management*** and backup, ***roll call***, geo-placement voting result presentation, ***agenda management*** for the conference, full system audio control, ***logging function*** and group speaking time pots.

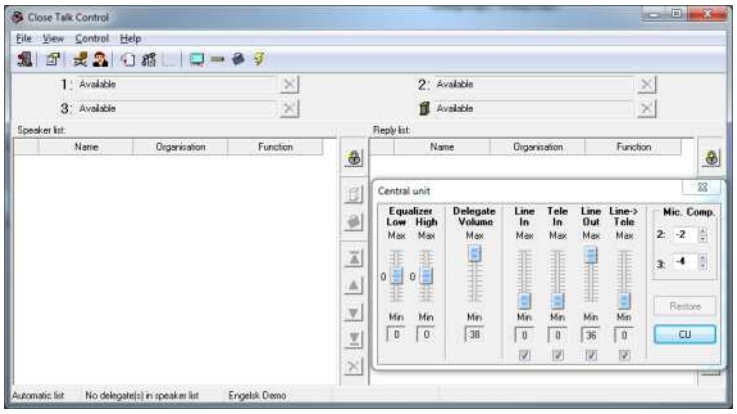
A basic audio-only conference system does not need any modifications, now or later, to start using *Close Talk Control*, any system can be upgraded at will. The software is provided with selectable modules of functionality, the base function is *conference* and the add-on choices are *voting* and / or *attendance and fee management*.

Formal conferences with voting and telephone conference

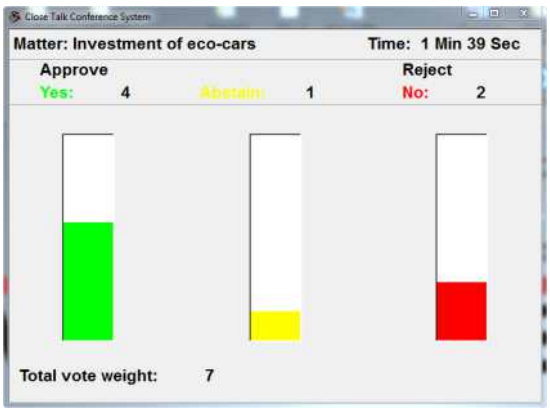
Close Talk Conference System together with the PC-software *Close Talk Control* naturally supports the use of a ***telephone hybrid*** creating a super conference system.

Multiple languages, interpretation

Close Talk Conference System is in normal use a "single language" system but by adding an external PA, two language support, so called ***1+1 language***, can be achieved.



The main operator panel in Close Talk Control



Voting result display

Camera follow support and video conferencing

The PC-software ***Close Talk Control*** contains camera follow functionality and supports most Pan-Tilt-Zoom-cameras on the market that uses the ***VISCA control bus*** such as the Sony EVI-Dxx series. Up to seven cameras can be controlled and *Close Talk Control* contains comprehensive tools for programming the functionality.

The program has several methods of control to maximize the camera use and create a smooth flow of images synchronized with the conference.

Using the camera follow functionality together with a ***video recorder*** provides a superb method of ***meeting archival***, with a third party ***video conference unit*** *Close Talk Conference System* becomes a "***super video conference system***" that supports large numbers of participants or with a ***media streaming server*** and you get a powerful ***web-tv*** system.

PTZ-camera using VISCA bus

Installation, maintenance, support tools and more

Close Talk Conference System is very easy to install, a typical system for normal office use consisting of 30 delegate units, one central unit and six transceivers can be installed, configured and handed over to the customer on as low as one working day. End-user personnel can easily be trained to set, start, test and take down the system.

The system maintenance is very easy, handle the delegate units with care and ensure that the batteries are kept charged. *Close Talk Conference System* is sold over the whole world in thousands of units and only receive about 3 - 5 service cases per year and then usually only discharged batteries and broken microphones due to faulty maintenance. *Close Talk Conference System* is very reliable and a good long-term investment.

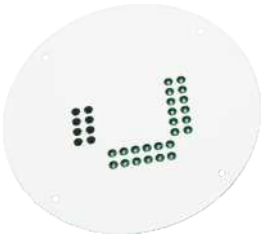
For installation and trouble-shooting, a free-of-charge PC-software is available for checking system signal levels and battery status. Download ***Close Talk Install*** from www.closetalk.se, install, connect to the system and the system health can easily be verified.

Several variants of the transceiver is available for most ceiling types. The central unit supports up to eight transceivers directly. For needs of more than eight transceivers or with complicated cabling situations, a ***Split Box SB-110-01*** is available. The split box is a one-to-six expander, providing an easy way to support large systems *or,* in cases where the running of large amounts of cables is problematic, to reduce the total length of installation cabling. The self powered split box is usually placed near the transceivers, using short cables, with only a few longer cables running to the central unit.

Our web site at www.closetalk.se contains a host of information including product information, installation instructions, softwares and user manuals.

Split Box SB-110-01

Transceiver TU-100-03



Transceiver TU-100-02

Swedish council

Dutch council

References and history

Close Talk Conference System is installed all over the world, in parliaments of several nations, large and well known organisations such as the UN, the World Bank and the US Senate, a large number of international councils and police departments and several private corporations and organisations.

Close Talk Conference System developed and produced in Sweden and has been on the market for over 15 years. For detailed product information and sales information, visit us at **www.closetalk.se**.

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