

# 2005 ICN

INTELLIGENT CONGRESS NETWORK

CONFERENCE SYSTEM



32 DIGITAL CHANNELS

Multichannel Digital Audio Network  
**MDAN**  
16 bit, 48 kHz

 **DIGITON**



## INTELLIGENT CONGRESS NETWORK

ICN 2005 (ICN=Intelligent Congress Network) is the further developed variant of DIGITON's popular ICN 2000 system. By carrying on the successful design, by an important expansion of the services, the ICN 2005 conference system means a favourable price/value solution. The 32-channel new communication system insures the transfer of 31 digital audio channels and 1 data communication. By a baud rate of PCM 16 bit/48kHz the audio channels provide a sound quality that fulfils all kinds of needs. The audio channels can be freely distributed among the interpreted languages and the active microphones while a system can be set up, which can fulfil the interpretation needs of even the European Union up to 23 languages, by the system of type ICN 2005. The principle of modular expansion opportunity was one of the most important aspects of the development. The cabling and power supply (supply unit) structures can be flexibly realised from meetings with a low number of participants up to parliamentary systems with several hundreds of participants. The participant units are made in three different versions. From the model insuring simple contribution and sound reinforcement to the model equipped with graphical LCD (Liquid Crystal Display) with chip card, all the versions can be coupled to the same system.



### SERVICES OF THE ICN 2005

#### Sound reinforcement and contribution system (basic services)

The designed participant units of the conference network include a microphone, a loudspeaker and a conference log-in push-button in the basic construction. The excellent sound quality and speech intelligibility are insured by a decentralised, controlled sound reinforcement technique solution. The microphone and the sound transmitter of the participant unit have cardioid direction characteristics for interference-free operation. Three versions of the central equipment set-up are possible. In the basic construction, the PEP 3001 Basic Unit is the central unit of the system (figure 1). The participant units only work in automatic operation mode in the basic set-up, voting is not possible but interpretation can be used. With the ETP 315 supply unit maximally 15, and with the ETP 370 supply unit maximally 70 participant units can be connected to the system. The maximal number of active microphones at the same time can be set on the PEP 3001 Basic Unit.

#### The characteristic features of the basic system:

- simple operation,
- easy and fast installation,
- excellent speech intelligibility,
- aesthetic appearance,
- the number of active microphones that can be set at the same time (1-29),
- multiple dialogue opportunity,
- microphone activation by push-button (automatic operation mode),
- tape recorder recording and playing,
- reception of the signal from outside sound reinforcement,
- switching in an outside participant via the telephone line.



#### Simultaneous interpretation system

The transmission of 30 different languages is possible in the conference system. The 31<sup>st</sup> channel transmits the floor sound while the 32<sup>nd</sup> channel insures data communication. Each interpreter has its own interpreter panel, thus, there are two units in each interpreter booth. The system insures the relayed interpreters' operation within the booth. The system supports the operation with several leading languages. On the headphone connected to the participant unit, the language desired to be listened to can be selected and the desired sound level can be set.

#### Voting system

The system insures a voting opportunity by up to three push-buttons. By the control unit with PEP 3002 processor anonymous voting can be organised while by the control unit with PEP 3004 and PC allows holding various roll-call votes and anonymous votes. On the LCD of the participant unit information on the start and end of the voting and the result of voting can be read.







## The controllers of the system

### Chip-card personal identification

The HEP 301VR participant unit includes an integrated card reader. The chip-card allows for the participant to be identified based on his / her card independently from the fact at which unit the participant is sitting, the system identifies the participants based on their card. The chip-card only provides a supplementary service not only from safety point of view but it also insures free sitting order to the participants. The application of participant units mounted with chip-card reader is only proposed if a PC controller is present.

### Message transmitting system

By using the LCD of the participant unit, messages can be transmitted to the conference participants without disturbing the meeting. The message transmission system only works on a system equipped with PC controller. When the message is typed to the control PC it is transmitted to the wished participant's unit from the PC's. A light signal appearing on the participant unit warns to the message that can be read on the LCD. The participant can acknowledge the message to the control centre.

The system can be operated by three different controls. The **PEP 3001** Basic Unit is the necessary element of all the versions, which, in addition to the synchronisation of the system, is also able to work as a basic-level controller (figure 1). By PEP 3001 the units work in automatic operation mode (microphone activation by push button).

The **PEP 3002** control unit equipped with processor allows complex control functions. The units can be controlled remotely from the control panel, thus, besides automatic operation mode, the system can also be operated in manual (parliamentary) operation mode. It is suitable for counting and displaying the votes. It manages the units based on their serial number (address) (figures 2-3).

The PC controller with **PEP 3004** is the controller insuring the most services. It assigns the participants to participant units or chip cards, thus, the participants appear in the system by their name. It records contributions, voting and other data and events of the conference, by also assisting the preparation of the conference minutes (figure 4).



## The units of the system

### PEP 3002 CONTROL DESK

It allows controlling the units remotely. It fulfils functions connected to the setting and control of the system. It insures both automatic and manual (parliamentary) operation modes. It is also suitable to organise anonymous, simultaneous voting. It can be placed easily anywhere in the system because it can be connected to the system cable in the same way as the participant units are connected.

### Technical data:

Channel number:	31 digital audio + 1 data
Sample rate:	48 kHz
A/D-D/A:	16 bit
Dynamic range:	More then 90 dB
Harmonic distortion:	Less then 0,1 %
Line bandwidth:	20-20000 Hz
Speaker bandwidth:	100-12500 Hz



## PEP 3004 PC CONTROLLER

The PC PEP 3004 control unit is a standard computer, which insures the widest possible scope of services with the aid of software running under a WINDOWS-based operation system. The block diagram of the system built with the PC controller can be seen in figure 4. The PC is connected to the system either via a parallel line or by a USB (Universal Serial Bus) port.



Hozzászóló		Funkció	Beszélt nyelv
Parlag Péter	Elnök	Magyar	

Szótár	Funkció	Beszélt nyelv
Szegedi Béla	Hozzászóló	Magyar
Beregszászi Zoltán	Hozzászóló	Angol
Fogarasi András	Hozzászóló	Francia

Előkezelő	Funkció	Beszélt nyelv
Bujdosó Imre	Hozzászóló	Német

Résztvevők	Funkció	Pri.	Stav.	Beszélt	Hallgat.	Intérmény
Parlag Péter	Elnök	2	X	Magyar	Magyar	
Agárdi Ábrahám	Hozzászóló	2	X	Német	Német	
Andrási Ádám	Hozzászóló	2	X	Magyar	Magyar	
Bencze Zsolt	Hozzászóló	2	X	Magyar	Magyar	Prihelszky Ny...
Beregszászi Zoltán	Hozzászóló	2	X	Angol	Angol	
Bujdosó Imre	Hozzászóló	2	X	Német	Német	
Cserai Barnabás	Hozzászóló	2	X	Magyar	Magyar	
Dénes Zsolt	Hozzászóló	2	X	Magyar	Magyar	Bernáth Gépj...
Egyed Béla	Hozzászóló	2	X	Angol	Angol	
Endrédi Péter	Hozzászóló	2	X	Magyar	Magyar	Fiktív Kft.
Erdői Kálmán	Hozzászóló	2	X	Magyar	Magyar	Palánk Rt.

Mód:	Manuális
1999.09.16. 14:20	

*HEP 301.. participant unit*

It insures for the participants of the conference to enter the system. It allows for the participants to reinforce the sound of the conference, to present themselves and to contribute, to vote, to select the interpreted languages and it allows receiving the participant's chip card with the aim of personal identification. Headphones can be connected to the participant unit for transmitting the interpreted languages and an LCD provides information on the settings and the operation of the system.



**The participant unit is prepared in three kinds of construction:**

- **HEP 301** Participant unit, transmits three interpreted languages,
- **HEP 301V** Participant unit with LCD and with the selection of the interpreted languages (up to 30 languages), and voting,
- **HEP 301VR** Participant unit with LCD, the selection of the interpreted languages (up to 30 languages), voting and personal identification by a chip card.

## HEP 300 chairman unit

In addition to all the functions of the HEP 301VR participant unit, it also includes the chairman's priority and voting start functions. If the chairman's priority button is pushed, the microphone on each active participant unit is switched off. If the prohibition is withdrawn, the microphones are switched on.



### HEP 303 interpreter unit

By its ergonomic design and services, the interpreter unit helps the work of interpreters. The unit is able to manage 31 audio channels. Its LCD helps selecting the listened to and translated languages and setting the operating modes and configuring the system. The system can be configured independently, thus, independently from the structure of the system, it insures interpretation in any kinds of structure. The connection of the INFRAPLEX 2005 wireless interpretation system with ICN 2005 is shown in figure 5.



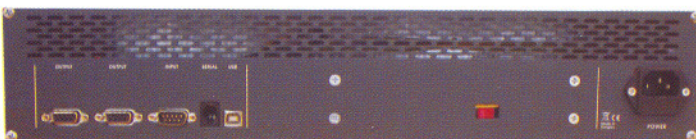


## The central equipment of the system

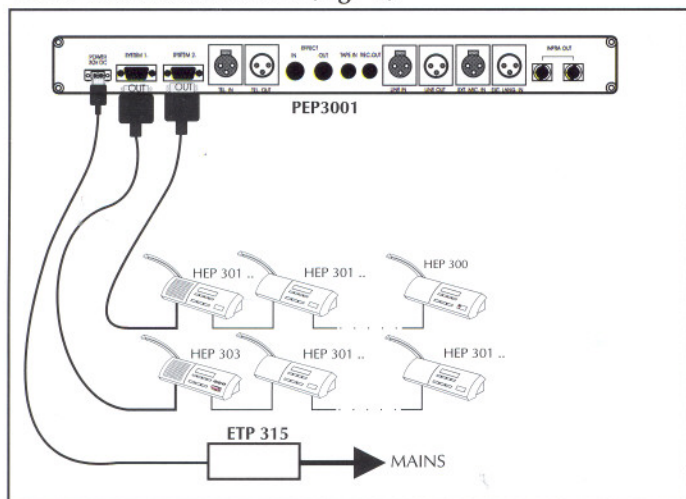
**PEP 3001 Basic device (Basic Unit)** is necessary for any configuration of the system. In addition to the synchronisation of the system, it also insures connection to outside systems. It allows connecting to outside sound systems, a telephone line, and tape recorder recording and playing. Outside microphones can be connected to it and it also has an outside interpreter input. It is able to work as the controller of a system of basic structure. Its connection to the system can be seen in figures 1 - 5.

The application of the **ETP 370 power supply and expansion unit** is necessary if there are more than 15 participant units. 70 pieces of participant units can be connected to the ETP 370. Systems of high participant numbers can be set up of several ETP 370 units connected together based on figure 4.

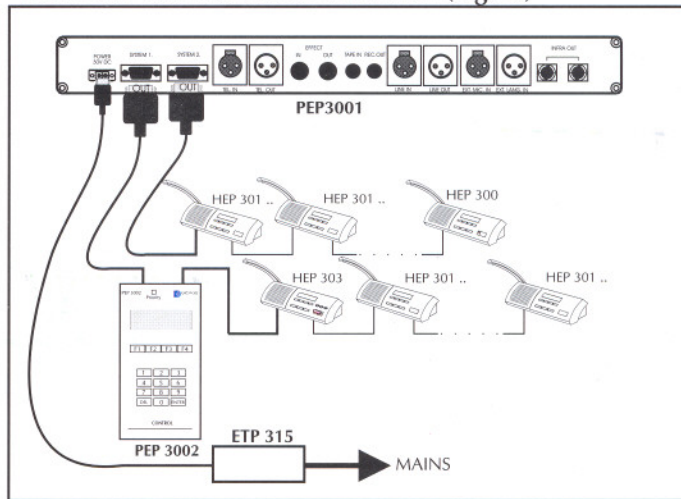
The **ETP 315 power supply unit** insures the power supply to 15 participant units, thus, it can be applied to setting up simple systems with small number of participants (figures 1-2).



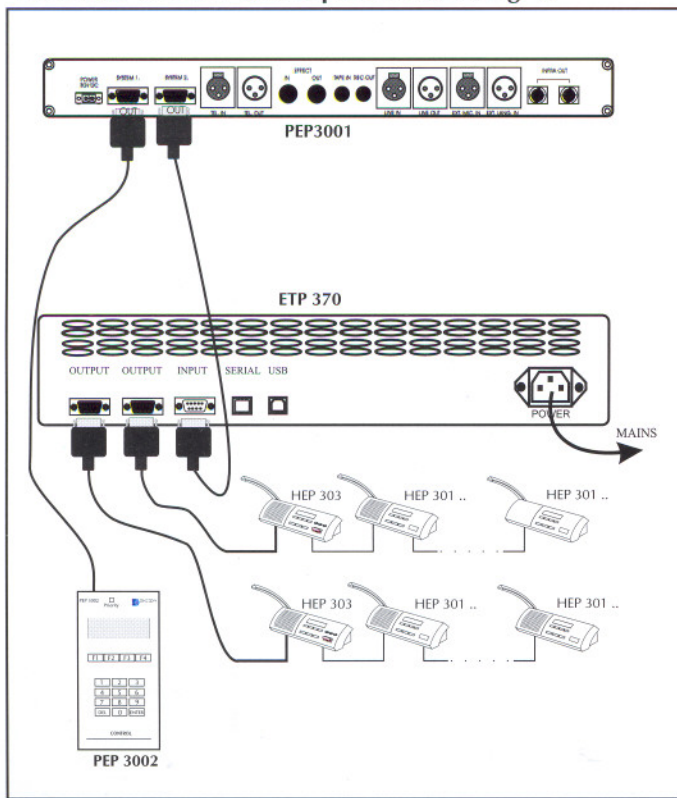
ICN 2005 basic network (Fig. 1.)



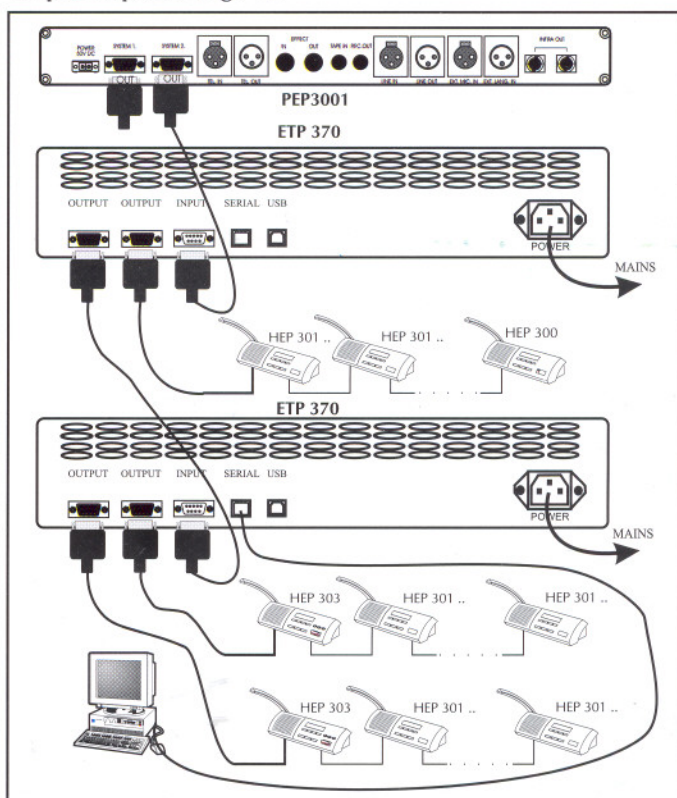
ICN 2005 with PEP 3002 Controller (Fig. 2.)



ICN 2005 with ETP 370 Expansion Unit (Fig. 3)



ICN 2005 with PC Controller(PEP 3004), in case of lots of participants (Fig. 4.)



The diagram illustrates the AYP 3001 system architecture. It shows the following components and their connections:

- PEP 3002**: A control unit with a display, function keys (F1-F4), a numeric keypad, and a 'CONTROL' button. It is connected to the PEP 3001 and the ETP 315.
- PEP 3001**: A central processing unit with various input/output ports. It is connected to the PEP 3002, the TAPE RECORDER, and the AYP 3001.
- TAPE RECORDER**: A unit connected to the PEP 3001.
- AYP 3001**: A large display unit with a grid of blue dots, connected to the PEP 3001.
- HEP 301..** and **HEP 303**: Handheld electronic devices connected to the PEP 3001.
- ETP 315**: A power supply unit connected to the PEP 3002 and the MAINS.
- AYP 307**: A series of handheld electronic devices connected to the AYP 3001.

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