

# SOUND SYSTEM OF HOTELS PA 405



**elektroimpex**  
BUDAPEST



Multi-program sound system of guest-rooms



Background music system in social rooms



Local amplifier sets



Portable amplifier sets



Separate sound system of ballrooms



Conference system



Interpreters' system



Conventional sets



Stereo sets



Small orchestra sets, so-called beat sets



The independent sound system of the conference room



Amplification system of the hall

# **SOUND SYSTEM OF HOTELS PA 405**

Tourism is a world fashion in our days. Super comfortable and simple new hotels are built in a surprisingly short time and also existing hotels are modernized. At present, not only accommodation has to be provided for the guest, but he or she must be entertained in the strictest sense of meaning. Perfect comfort, service and entertainment have to be ensured.

To promote such modern hospitality, Elektroimpex offers the new PA 405 type hotel sound system as a resource device, an indispensable means of information and entertainment.

## What duties should a hotel sound system discharge?

- Multi-program for guest-rooms broadcasting
- Transmission of background music in the social halls
- Possibility of directing and calling persons
- Alarm-signalling
- Local amplification in restaurants and bars
- Program change facility among the rooms fitted with local amplifiers
- Independent amplification of ballroom programs
- Amplification and interpreting facilities at international conferences

## What rooms should the sound amplification system serve?

- guest-rooms
- social rooms: halls, corridors, lounges, restaurants, bars and service rooms (souvenir shop, hairdresser)
- the ballroom
- the conference and board-room
- service rooms, offices
- the parking lot and the garage
- the swimming-pool and park

## Advantages of a custom-designed sound system as opposed to equipment purchased random

Every establishment has its own special, functional demand, which involves technical requirements. Only carefully designed sound systems can ensure the functional and technical balance.

Designing sound systems, we consider the following aspects:

- functional demands
- a field and room acoustic demands
- electronic compatibility of equipments
- international standard specifications
- optimal utilization of the establishment and the electro-acoustical system
- operation experience gained in existing hotels
- expansion possibilities of the sound system in case of future expansion

## The construction of a hotel sound system



Multi-program sound system of guest-rooms,



Background music system of social rooms



Local amplifier sets



Portable amplifier sets



Separate sound system of ballrooms



Conference and interpreter system of the conference hall



### Multi-program sound system of guest-rooms

Functions:

- Multi-program broadcast- transmission with program selection and volume control facilities
- Transmission of information for guests
- Alarm-signalling



### Background music system of social rooms

Functions:

- Transmission of musical programs, with individual volume control facilities
- Transmission of information for guests
- Possibility of directing and calling persons
- Alarm signalling

The minimal demand of hotel sound systems is to supply the guest-rooms and social rooms with multi-program broadcasting.



The sound system of hotels can be further expanded to request.



### Local amplifier sets

These can be used in rooms where background music is not sufficient.

Functions:

- Amplification of local programs
- Program change (local programs to be transmitted to other social and guest-rooms)

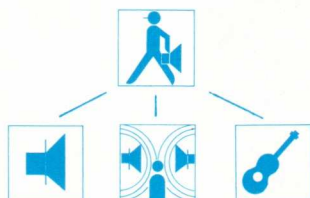


### Portable amplifier sets

Functions:

- Amplification of local programs
- Amplification of club programs
- Amplification of small orchestras

Three types of portable amplifier systems can be distinguished by the service rendered, where no sound system is installed:



### The independent sound system of the ballroom

Functions:

- Amplification of ballroom programs
- Transmission of ballroom programs to the other parts of the hotel (guest-rooms, social rooms) through the background music system
- Transmission of ballroom programs to the ballroom halls



### The independent sound system of the conference room

Functions:

- Amplification of conferences and lectures
- Amplification of the speech of participants and lecturers
- Interpretation of multilingual lectures

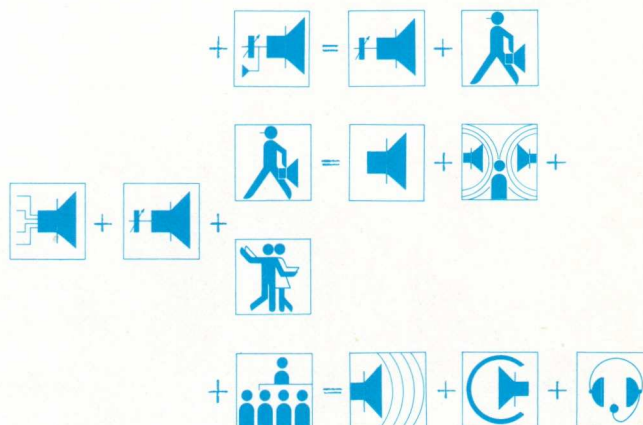
The sound system of the conference room consists of three sub-systems:



## Why is the complete sound system economical?

The complete sound system ensures multi-purpose uses and the better exploitation of the hotel. Different programs can be organized in hotels equipped with, to increase the economy of the hotel.

### Construction of complete hotel-sound system



### Advantages of the complete sound system:

- The exploitation of the establishment can be improved (by events of private organizations, fashion shows, conferences, congresses, international negotiations)
- Improved economies of the establishment can be attained (besides hotel guests, also other guests can be entertained and catered for)
- Great international events can be organized (the number of hotel guests increases)
- The hotel can be classed in a higher category
- Guests leaving the hotel with pleasant impressions will return or recommend the hotel to others

### Our services:

- Designing of complete sound systems
- Delivery of complete sound systems
- Putting into operation complete sound systems
- Training of operators

**HILTON hotel represents a good example of a hotel sound system. The complete system of that hotel was put into operation in 1976.**



### **Multi-program sound system in guest-rooms**

Guests can select any of 4 programs in their rooms by the program selector on the program panel built in the furniture. Guests can adjust the volume of the program by the volume control knob.

#### **Program panels are available in many variations:**

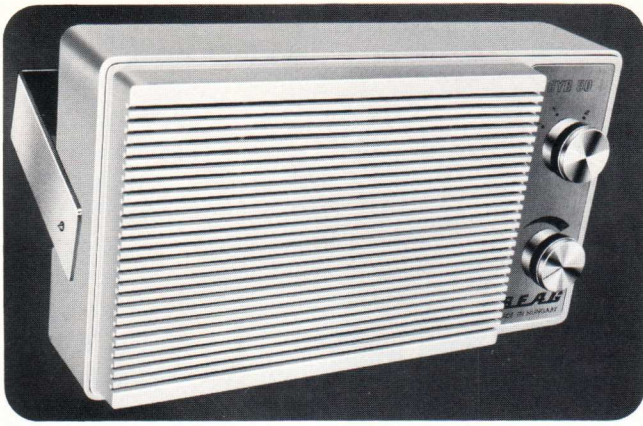
Types HYB 50, 51, 52 complete with loudspeaker, volume control and program selector.

- Box type HYB 50 outwall model.
- Box type HYB 51 flush-mounted model.
- Panel type HYB 52 flush-mounted model.
- Type HYB 53 program panel, which contains besides the above said, TV and airconditioner switches and a message lamp.
- Type HYB 54 program panel, which room for a clock to request.



**EKP 04**

From the reception or from the telephone exchange alarm signals can be transmitted to all hotel areas fitted with amplifiers. The system ensures that the alarm can be heard at maximum volume in whichever position the program selectors and volume controls are kept including off position.



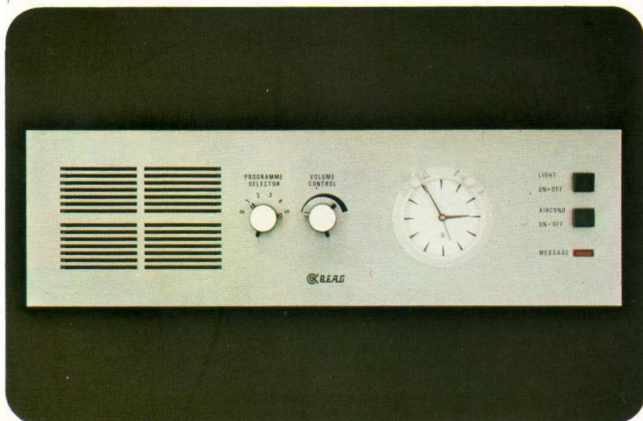
**HYB 50**



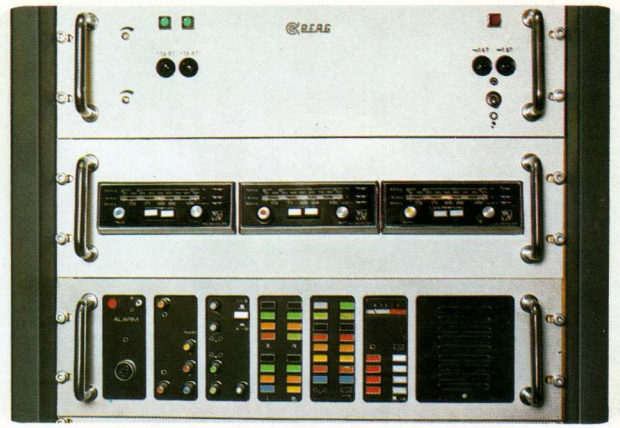
**HYB 51**



**HYB 53**



**HYB 54**



**KEP 23**



**KEP 82/B**

Power amplifier racks necessary for the hotel sound systems can be located also in separate rooms. One power amplifier consists of five 80 VA units. The racks are of remote control type, they require no maintenance and are suitable for non-stop operation.







## Background music system of social rooms

Background music is transmitted to the social rooms. The background music program is usually the same as guest-room. The volume of loudspeakers can be controlled both centrally and individually. This warrants the necessary discrete volume program within the whole hotel. From the reception, persons can be called separately into the hall.

The flush-mounting loudspeakers of the background music system are built in the suspended ceiling of social rooms.



## Local amplifier sets

The sound system of restaurants and bars is designed so that the system of any room can be switched off the central background music system and a local amplifier set can be connected instead. Moreover the program can be changed, that is, through the background music system local programs can be transmitted to guest-rooms. In the social rooms the volume control and the connectors of the local amplifier set are accommodated in a box built in the wall, complete with lock and key.



## Portable amplifier sets

Various local amplification tasks can be solved by portable amplifier sets.



The conventional amplifier set contains microphones, mixing and power amplifiers and loudspeakers.



A stereo system enables the listening of stereo tapes and records. It is suitable for amplification in clubs. It contains stereo amplifier loudspeakers and a play of light system.

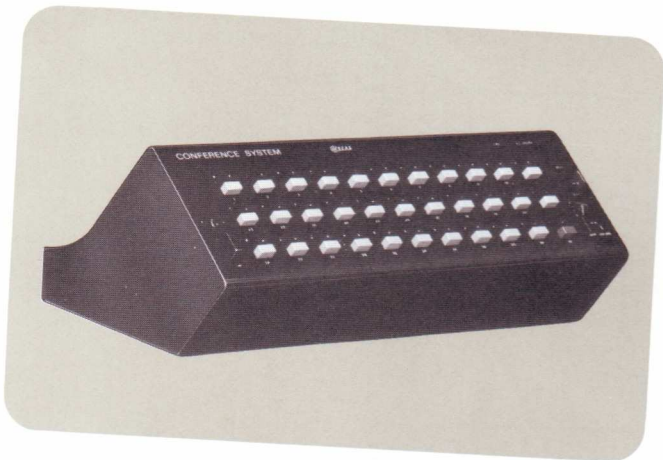
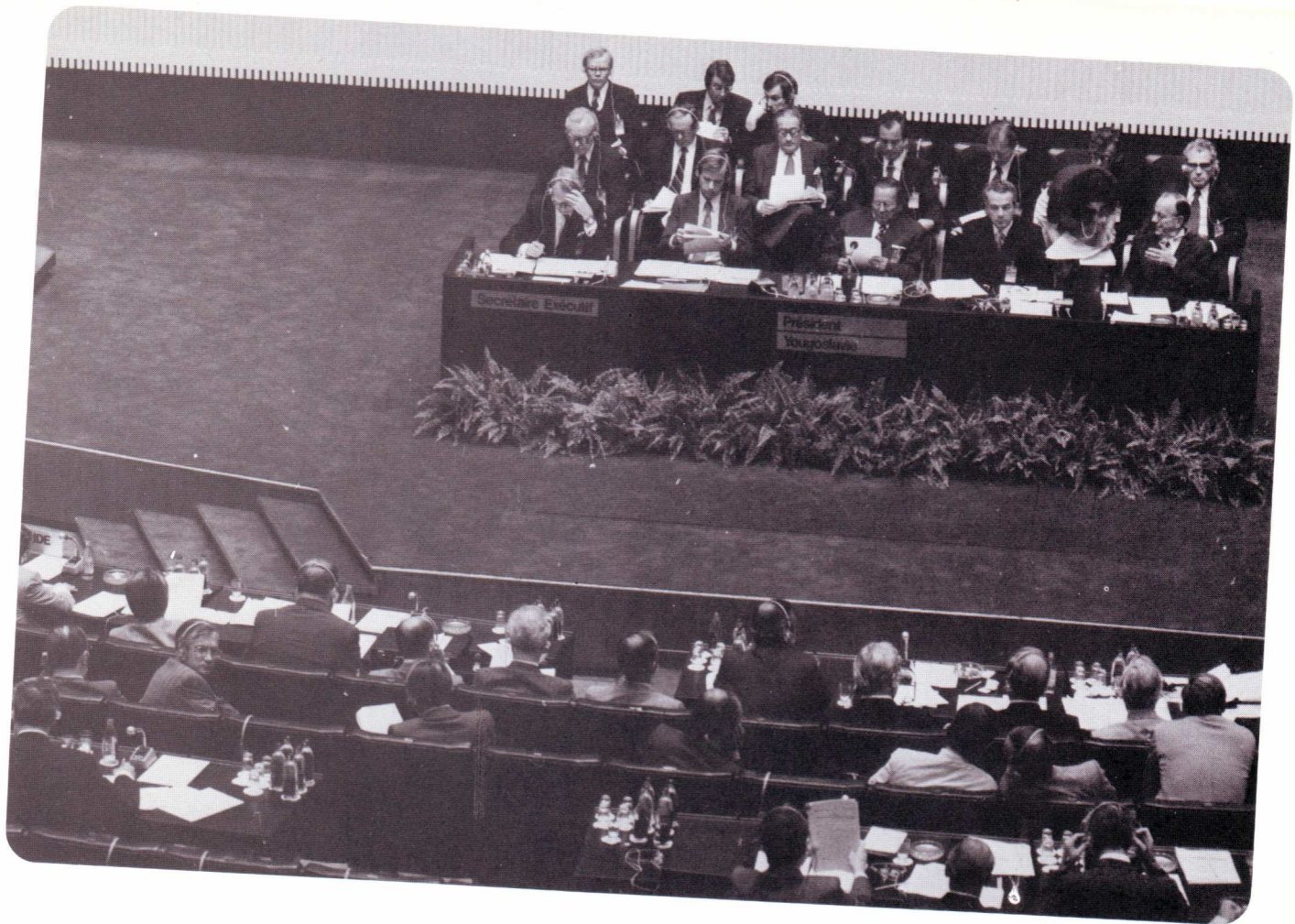


Small orchestra set.



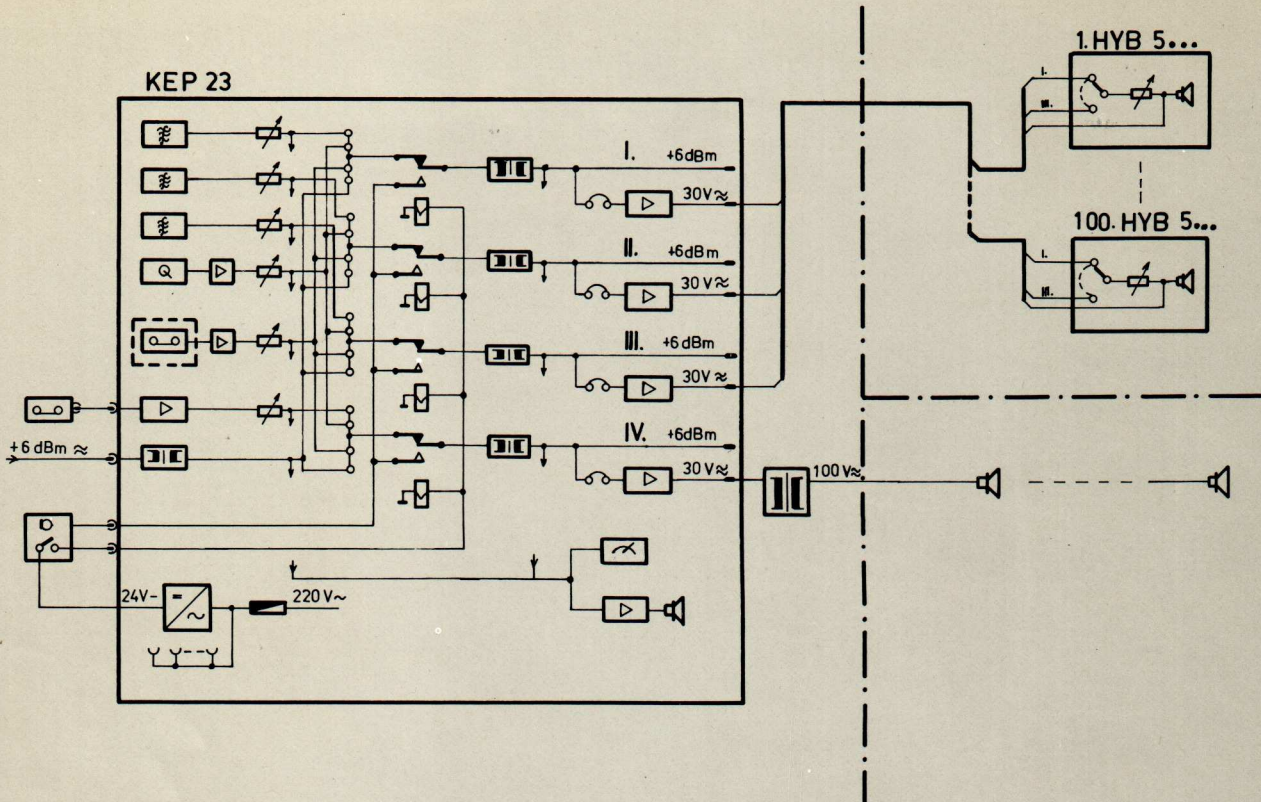
### **The independent sound system of the ballroom**

Various variety and fashion shows, exclusive programs can be organized in the ballroom. The ballroom has its own studio. The ballroom is in full view from the studio. The signals obtained from the microphones located in the ballroom are mixed by an eight-channel mixing desk. The program of the ballroom can be transmitted to the guest-rooms. At the Budapest HILTON Hotel, the equipment of the multi-program sound system of guest-rooms as well as the background music system of social rooms is installed in the separate ballroom studio. The program change in social rooms can be programmed by the help of a matrix-type commutating board located on the side wall.

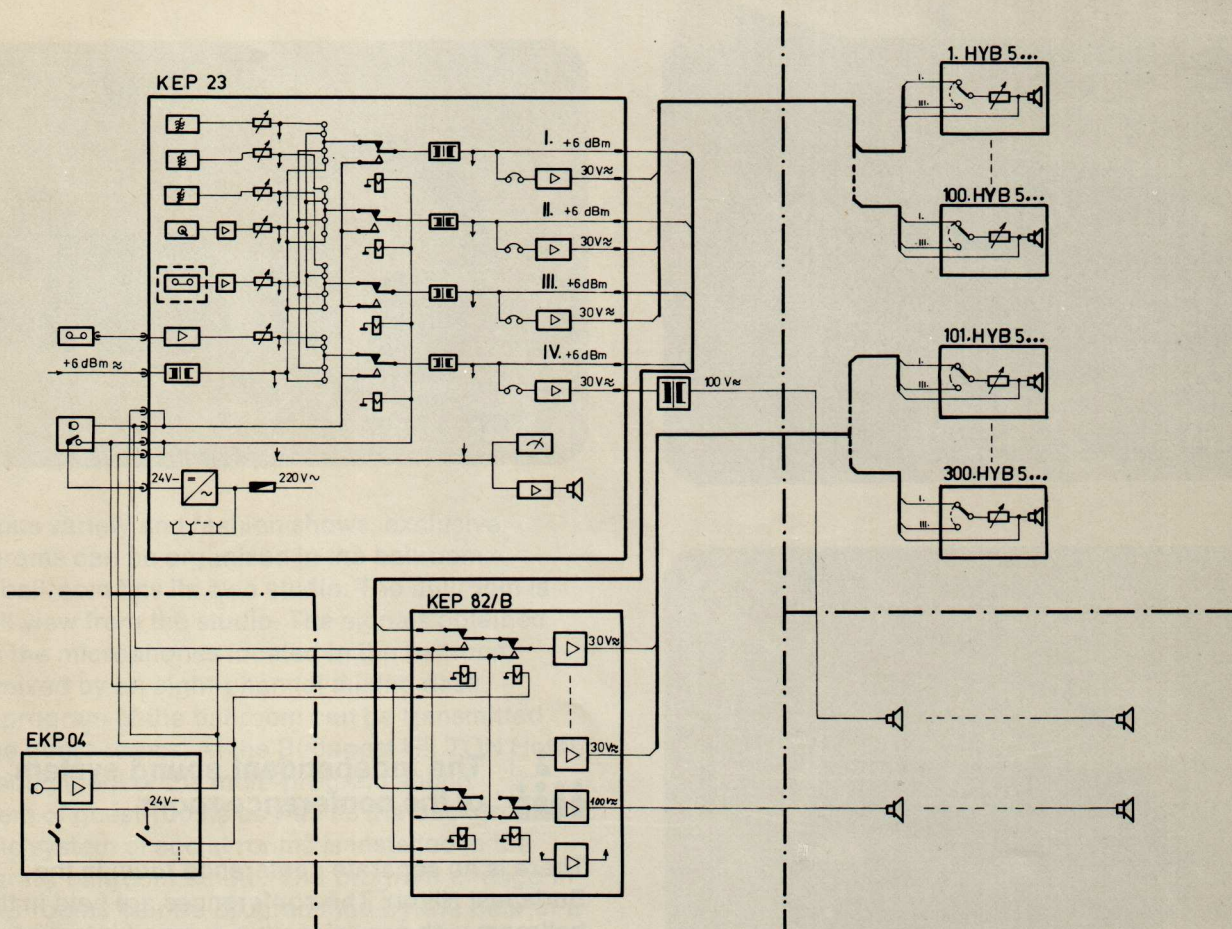


### The independent sound system of the conference room

There is no separate conference room in the Budapest Hilton. The conferences are held in the ballroom with provisionally equipped interpreter's and conference systems.



Complete sound system of hotels up to 100 rooms



Complete sound system of hotels over 100 rooms

## LIST OF REFERENCES

- National Hotel, Rangoon, Burma
- Hotel "Budapest", Budapest, Hungary
- Hotel "Duna Intercontinental", Budapest, Hungary
- Hotel "Capsis", Thessaloniki, Greece
- Hotel "Syrene", Athens, Greece
- Hotel "Lissis", Poros, Greece
- Hotel "Chevalier", Rhodes, Greece
- Hotel "Intourist", Moscow, Soviet Union
- Hotel "Park", Bucharest, Rumania
- Hotel "Park", Sofia, Bulgaria
- Hotel "Albena", Albena, Bulgaria
- Hotel "Continental", Bucharest, Rumania
- Hotel "Geriatric", Bucharest, Rumania
- Hotel "Mica", Bucharest, Rumania
- Hotel "Capitol", Bucharest, Rumania
- Hotel "Otopeni", Bucharest, Rumania
- Hotel "Hilton", Budapest, Hungary
- Hotel "Hungaria", Szeged, Hungary
- Hotel "Neptun", Balatonföldvár, Hungary
- Hotel "Termál", Margitsziget, Budapest, Hungary

## KEP 23

### Program source rack

The program-source rack provides and amplifies 4 independent programs simultaneously.

- Design: 19" rack
- 3 built-in radio receivers (MW, SW, FM)
- A built-in record player
- Place for a tape recorder
- Preamplifiers, program selector, monitoring unit
- 2 pcs 2 x 50 W power amplifiers
- 3-wire program/instruction system, built-in alarming function
- 30 V audio line.

**Inputs:**

line level: 2 balanced, free from earth inputs  
input level: +6 dBm

tape recorder: 2 unbalanced inputs  
input level: -12 dBm

**Outputs:**

mixer amplifier: 4 balanced, free from earth outputs  
output level: 0 dBm

power amplifier: 4 balanced, free from earth outputs  
rated output voltage: 30 V  
load impedance: 10 ohms

**Connections:**

program sources, through DIN connectors  
others: 8-pole "fuge"

Mains voltage: 220 V, 50 Hz

Power consumption: appr. 600 VA

Dimensions: 540 x 520 x 1780 mm

Weight: 190 kp



## KEP 82/B

### Power amplifier rack

Its use is necessary in hotels with more than 100 rooms.

- 5 x 100 W amplifiers
- Each amplifier including a program input
- two priority command inputs
- lowpass and highpass filters
- 3-wire program/instruction system
- 4 + 1 mode (standby selection)
- Non-stop operation mode
- Outputs monitored by indicating meter or listening-in
- Facilities of remote control

Inputs: balanced, free from earth  
source impedance: max. 600 ohms

sensitivity: +6, +12, +18 dBm, re-solderable

Outputs: balanced, free from earth

rated output voltage: 100 V or 30 V

load impedance: 125 ohms or 15 ohms

power: 80 W or 60 W

max. power: 100 W or 80 W

Connection: through soldering, to the terminal strips  
at the bottom part of the bay

Mains voltage: 220 V, 50 Hz

Power consumption: 1.1 kVA

Dimensions: 458 x 300 x 1732 mm

Weight: appr. 170 kp



## PKP 11

### 6-channel portable mixer

Portable mixer of professional quality, featuring IC design, incorporated in a transport case.

- 6 input channels, 1 output group
- auxiliary group (for monitoring and recording purposes)
- tone control for each channel and group
- built-in audio generator
- listening-in through headphone
- dynamic drive meter (program level)
- accessories (power supply, headphone in transport case)

Inputs: balanced, free from earth  
source impedance: microphone: 200 ohms  
line: 600 ohms  
sensitivity: microphone: -62 to -38 dBm  
line: -12 to +12 dBm  
Outputs: balanced, free from earth  
load impedance: 600 ohms, min. 200 ohms  
rated output level: main output: 0, +6, +12, +18 dBm  
side output: +6 dBm  
through DIN connectors  
Connection: 220 V, 50/60 Hz  
Mains voltage: 10 VA  
Power consumption: mixer: 410 x 290 x 75 mm  
Dimensions: power supply: 160 x 90 x 60 mm  
mixer: 7 kp  
mixer with transport case: 8.2 kp  
Weight: accessories with transport case: 4 kp



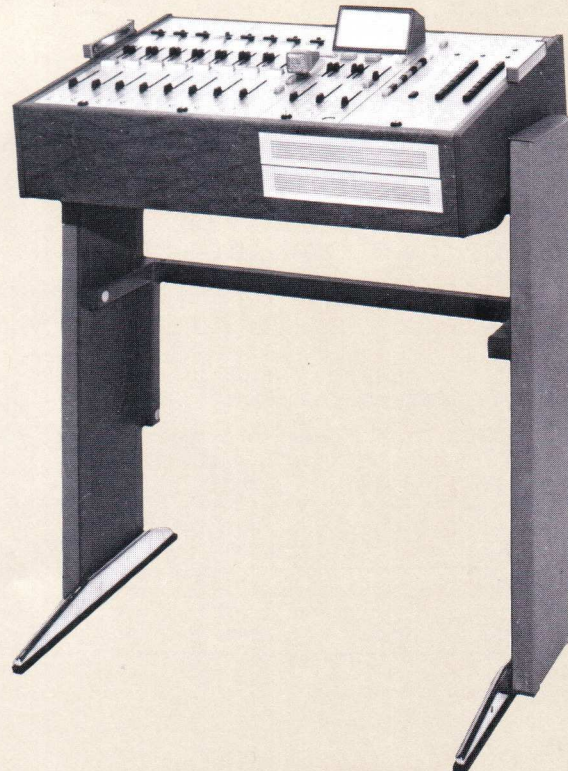
## PKP 19

### 8-channel mixing desk

A professional mixing desk of IC design.

- 8 input channels, with 16 outputs
- 3 output groups, with 2 main outputs and an auxiliary output
- Tone control for each channel and group
- Built-in audio-frequency generator
- Monitoring system
- Peak drive meter (program level)

Inputs: balanced, free from earth  
source impedance: microphone: 200 ohms  
line: 600 ohms  
sensitivity: microphone: -62 to -38 dBm  
line: -12 to +12 dBm  
Outputs: balanced, free from earth  
load impedance: 600 ohms, min. 200 ohms  
rated output level: main outputs: 0, +6, +12, +18 dBm  
auxiliary output: +6 dBm  
through DIN connectors  
Connection: 220 V, 50/60 Hz  
Mains voltage: 40 VA, max. 80 VA  
Power consumption: 456 x 640 x 173 mm (exclusive of legs)  
Dimensions: 456 x 640 x 850 mm (with legs included)  
Weight: appr. 35 kp



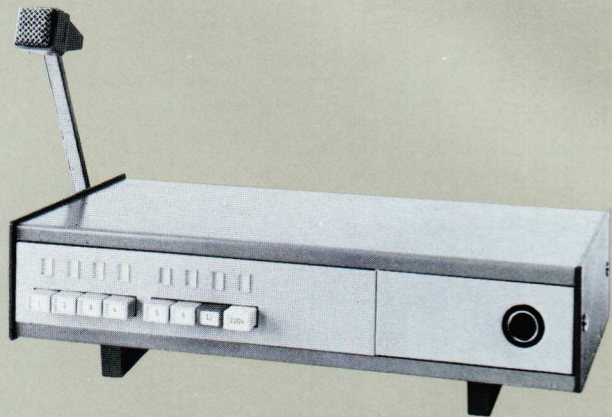
# EKP 04

## Instruction unit

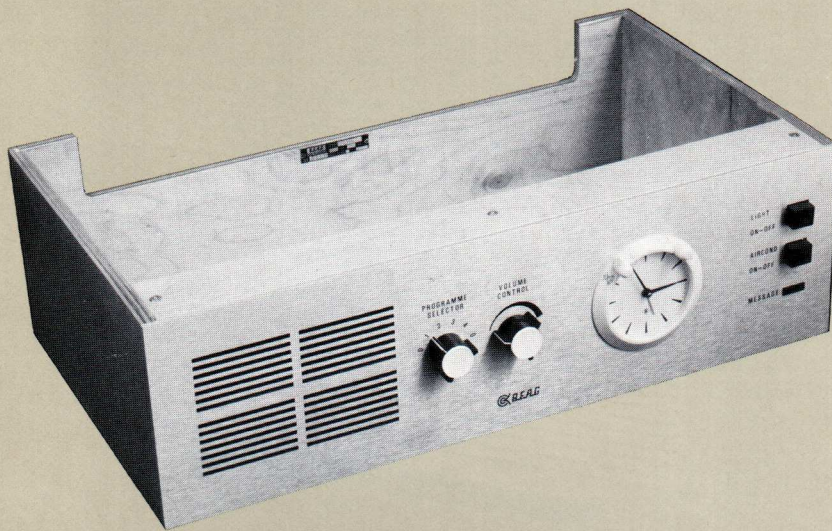
Its operator can interrupt at any time the program in the sound system, transmitting instruction or information to six different fields.

- Built-in microphone
- Facilities of connection to external microphone
- Instructions to be programmed separately to 6 places
- Remote switch of power amplifier rack (for night and standby service)
- "Busy" signal

Microphone input: unbalanced  
source impedance: max. 200 ohms  
sensitivity: -72 dBm  
Output: 6 balanced (free from earth) outputs  
output impedance: 600 ohms  
output voltage level: +6 dBm  
Connection: through soldering  
Supply voltage: 24 V d. c.  
(consumption without modulation)  
max.: 20 mA  
190 mA  
Dimensions: 370 x 190 x 100 mm  
Weight: appr. 5 kp  
Power Supply:  
type: ETC 02 or ETC 04  
24 V d. c. 24 V d. c.  
loadability: 125 mA or 1 A  
dimensions: 190 x 370 x 80 mm 320 x 190 x 170 mm  
weight: appr. 1.8 kp or appr. 3.5 kp







## HYB

### Multi-program selector panels

According to its particular type, it is provided with

- sound volume control
- program selector
- message lamp
- power switches (lighting, television, air conditioning equipment)
- clock (with central generator)
- alarm-clock device

The equipment can also be operated in a 3-wire program/instruction system.

	HBY 50	HYB 51	HYB 52	HYB 53	HYB 54
Number of programs to be selected	3	3	3	3	4
Power handling capacity (VA)	1.5	1.5	1.5—0.32 0.135	1.5—0.32 0.135	1.5—0.32 0.135
Line voltage (V)	100 HYB 50/C 30 V	100 HYB 51/C 30 V	30	30	30
Dimensions (mm)	220 x 125 x 70	246 x 151 x 72	290 x 120 x 100	365 x 120 x 100	510 x 150 x 285
Weight (kp)	1	1	1.2	1.3	5
Constructional feature	suspended from wall	flush-mounted	flush-mounted	flush-mounted	flush-mounted on night-table
Message lamp provided	no	no	no	yes	yes
Number of power switches	none	none	none	3	2
Place provided for clock and alarm device	none	none	none	none	yes



## HTB                      HPB

### Loudspeakers in plastic boxes

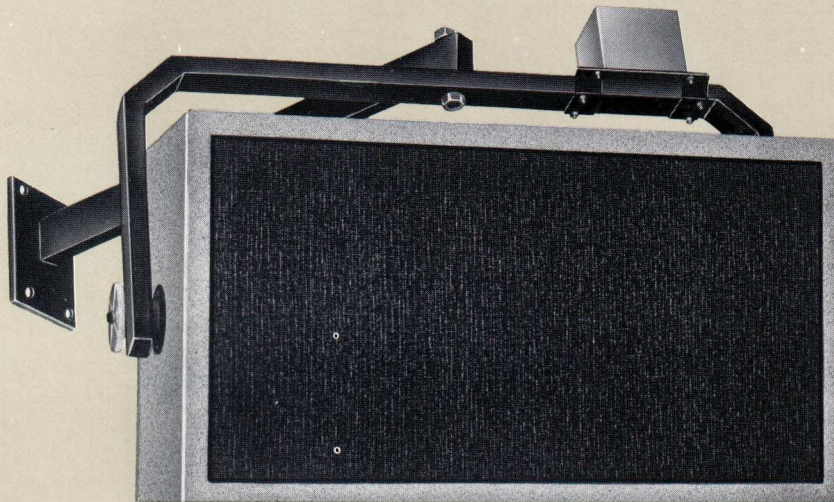
Plastic-box loudspeakers suitable for transmitting both human voice and musical programs. The family of loudspeaker boxes has a broad variability of application.

- Wall-mounted design
- Flush-mounted design (in wall or ceiling)
- Models to be connected to an audio line of 100 V or 30 V
- Sound volume variable or without a volume control

The HPB loudspeakers are also applicable in a 3-wire program/instruction system.

	HTB 50	HTB 51	HPB 50	HPB 51
Power handling capacity	3, 1	3, 1	1,5	1,5
Line voltage (V)	100	100	100	100
Dimensions (mm)	220 x 125 x 70	246 x 151 x 72	220 x 125 x 70	246 x 151 x 72
Weight (kp)	1	1	1	1
Design	suspended from wall	flush- mounted in wall	suspended from wall	flush- mounted in wall
Volume control provided	none	none	yes	yes

The letter "C" following a fraction mark in the type designation represents a model for 30 V line voltage (e. g. HPB 50/C).

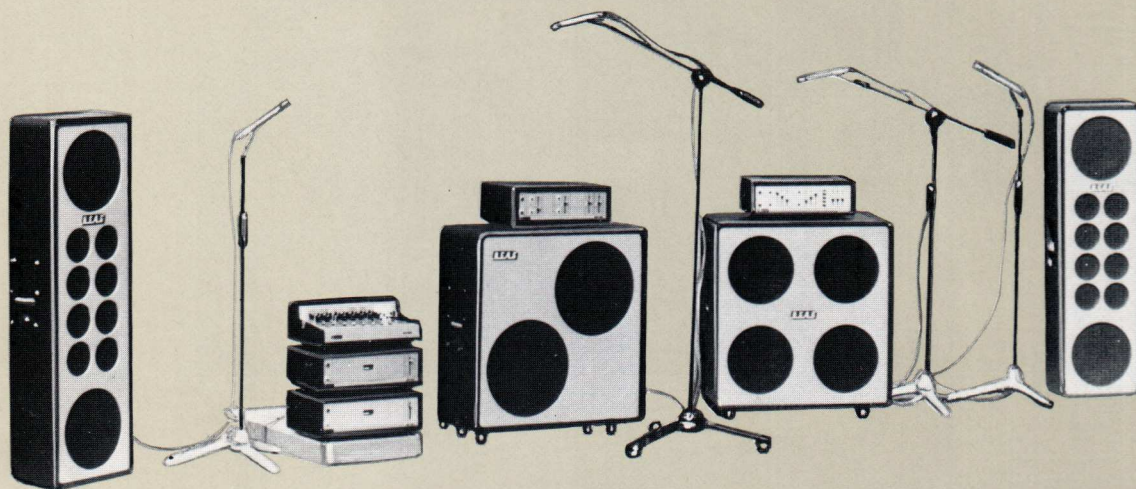


## HOX

### Family of sound radiators

Wooden-box sound radiators of Hi-Fi quality for providing background music and local programs. They are of low-impedance design (8 ohms); matching transformer can be used for matching them to an audio-frequency network of 100 V. They can be mounted on the wall by means of a console.

	HOX 20	HOX 21	HOX 22	HOX 50	HOX 51
Impedance (ohms)	8	8	8	8	8
Frequency Range (Hz)	50—20000	50—20000	40—20000	55—20000	50—20000
Power handling capacity (VA)	100	100	200	25	50
Number of built-in loudspeakers	4	4	8	1	2
Dimensions (mm)	290 x 600 x 160	400 x 600 x 110	290 x 600 x 325	190 x 240 x 150	240 x 390 x 190
Weight (kp)	6.5	6.5	16	2,5	5
Matching transformer	TY 218-D	TY 218-D	TY 218-D	TY 219-D	TY 219-D
Console	BQO 20274	BQO 20274	BQO 20274	BQO 20274	BQO 20270



## Type HHX-5 "Beat Set"

Small orchestra set for Music Band

The Type HHX-5 sound system will transmit the "live" programs of music bands at a professional level, applying studio technical arrangements.

The HHX-5 system employs three sound networks (applicable as self-contained networks as well). They are:

HHX-6 sound network (solo guitar, accompanying guitar, organ)

- 1 pc AET-102 amplifier (100 W)
- 1 pc HOX-06 sound radiator (100 W)

HHX-7 sound network (bass guitar)

- 1 pc AET-100 amplifier (100 W)
- 1 pc HOX-07 sound radiator (100 W)

HHX-8 sound network (singers)

- 1 pc AKT-800 8-channel mixer, with built-in reverberator
- 2 pcs APT-101 amplifiers (100 W)
- 2 pcs HOX-08 sound radiators (100 W)
- 8 pcs MD-210-06 microphones
- 8 pcs DM-223 microphone stand
- 8 pcs EX-330 microphone cables (30 m each)

## KM 30

### Conference system

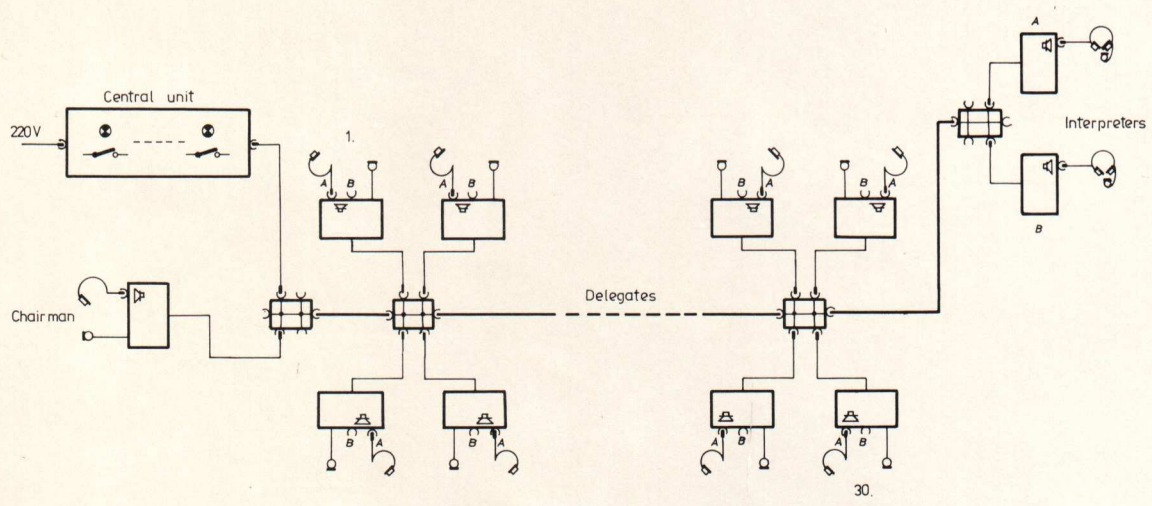
The technical aid of the quick and smooth organisation of conferences and talks. For international conferences, bilingual interpretation facilities are provided.

- Quick, mobile installation
  - Attractive outward appearance
  - Analog and digital IC technology
  - Manual and automatic operational modes
  - The speeches can be recorded on tape
- The basic configuration will serve 30 active participants. It can be expanded to 90 participants by the interconnection of several systems.

Parts of the system are:

- Operator desk
- Chairman's unit
- Active participant's unit
- Passive participant's unit
- Interpreter unit





KM 30 Conference System

Manufactured by:



ELEKTROAKUSZTIKAI GYÁR

Exported by:



ELEKTROIMPEX

1051 Budapest, Münnich F. u. 21.

Telex: ELIMP-H 22-5771

1392 Budapest, P. O. B. 296

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