

# PAC-5000A

Multi-zone all-in-one 2 bus Mixer Amplifier



## | SUMMARY |

The PAC-5000A mixer amplifier is a digital multi-zone amplifier system offering up to 24 separate zone switching/selection and BGM facilities. The PAC-5000A has 24 zone outputs separated into 2 groups of 12. Each group is powered with a 300W amplifier for a total of 600 Watts of power. Built in to the PAC-5000A is an AM/FM tuner, a media and a CD Player. The mixer has 6 microphone inputs on 3 pin XLR, a telephone paging input and 3 aux inputs on dual RCA sum-to-mono.

## | OVERVIEW |

The PAC-5000A is the latest generation combination all-in-one Public Address system. The PAC-5000A design was inspired from Inter-M's PAC-5000. The PAC-5000A with its dual 300W per channel of Class D amplifier offers twice as much power than its predecessor the PAC-5000.

New features include Software Controlled and Configuration, multiple source playback including an internal MP3 Player, Multi-zone paging, emergency pre recorded messaging.

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The PAC-5000A has all the functions of a large multi-device system integrated in one easy to install unit. This all-in-one space saving, source, mixer, amplifier and zone speaker selector is an ideal system for a small budget. The Inter-M PAC-5000A is both mains and DC powered.

The PAC-5000A is the ideal all-in-one compact integrated system for many applications including shopping centres, halls, office blocks, retirement homes and apartment complex installations.

## | PAC-5000 vs PAC-5000A |

PRODUCT		PAC-5000	PAC-5000A
Power consumption		120W + 120W (CLASS-D, SMPS)	300W + 300W (CLASS-D, SMPS)
Priority broadcasting		⊙	⊙
Source	CD	⊙	⊙
	TUNER	⊙	⊙
	USB	⊙	⊙
	DRP	⊙	⊙
INPUT / OUTPUT	MIC/LINE	5 (PHANTOM 24V)	5 (PHANTOM 24V)
	AUX	2	2
	FIRE SENSOR	24 CH	24 CH
	RM	4 (≤500M)	4 (≤500M)
	CIVIL BROADCAST		⊙
	CONTACT (A, B, COM)		⊙
	DATA	RS-232C	RS-232C
	SPEAKER	24 CH	24 CH
Additional features	SD CARD (EM)	⊙	

## | Space Saving Installation |

The PAC-5000A is an all-in-one system that combines multiple input source devices microphone and line mixer, 2 amplifiers and and speaker selector. Having all these functions and devices in one unit simplifies and cuts down on labour installation costs.

## | Simultaneous dual bus broadcasting of different Sources |

The dual bus permits 2 different sound sources to be broadcasted into each of the 2 buses. Group A (ZONE 1~12) can play one source, Group B (ZONE 13~24) can play another. Each Group, A or B can broadcast the same or different sources.

## | System Scalability |

The system can easily be expanded and sound sources can be shared across multiple PAC-5000A. Up to 4 slaves can be connected to one master unit. Connection is easy using an RJ45 type cable and linking the units though the LINK-IN/OUT terminal. (MASTER 1unit, SLAVE 4unit)

### | Class D type Amplification |

Class D audio amplifiers offer greater power efficiency over traditional amplifiers. Among their advantages is their reduced physical size and lower heat dissipation. They offer less than 1% THD, total harmonic distortion with an increased signal to noise ratio to 75dB and a widened frequency response from 50Hz ~ 20kHz.

### | 24 selectable zone paging and BGM |

The PAC-5000A system offers 24 separate zones of switching/speaker selection for zone paging and BGM. Total zone can be expanded up to 120 channels linking 2 PAC-5000A.

### | Fire detection and emergency broadcasting |

The system provides 24 channel sensor input terminals for automatic fire alarm broadcasting. It also provides the ability to recording a fire alarm message for fire alarm broadcasting.

### | Mixing of external sources |

An integrated mixer with 5 microphone or line level channels on XLR-F connectors allow the mixing of external audio devices such as microphone or any other line level sources. All 5 inputs can provide phantom power to condenser type microphones.

### | External equipment control |

An external contact trigger combined with the EM inputs can be used to control external devices. External devices can trigger messages to be broadcasted in a zone using the 24 EM inputs.

### | Emergency power and battery charging |

Simultaneous dual redundant AC and DC power operation offering un-interrupted operation with DC 24V emergency backup battery in the event of an AC mains power outage.

When main AC power fails, the PAC-5000A seamlessly and automatically switches to the DC 24V battery backup. A built-in battery charger ensures that the battery is always charged and ready to use.

### | PC Program broadcast |

This function is part of the PC control software, it allows a sound file stored within the PC to be broadcasted by the PAC-5000A to a specific output zone. This is a timed event function.

### | MIC Priority Broadcasting |

Input Priority is pre-set in order from CH 1 to CH 6, with channel one having the highest priority and channel six has the lowest priority.

### | Built-in monitor speaker |

A built-in speaker allows monitoring of the two audio buses. This is a good confidence verification of the system.

### | EM (Emergency) Microphone |

A front panel installed microphone can easily be used to make an emergency voice broadcast.

### | EQ Mode |

An equaliser allows the user to set the desired tone of all input sources including BGM.

### | 3rd party remote control |

An RS-232 port can be used by a 3rd party control system such as AMX or CRESTRON.

1. 2 Bus public address system
2. 2 Amplifier channels with each 12 Zone speaker selector system (120 ZONE capacity when linking up to 2 x PAC-5000A)
3. High-output 2CH 300W built-in digital amplifier
4. System expansion (Master 1, 4 Slave)
5. Control of priority (3 or 4 wire) over-ride attenuator
6. REMOTE MIC (RM-6024) control (4 unit per system)
7. Emergency broadcast and Messaging (Up loadable file source)
8. Remote control available using contact points (A, B, and A&B 3 ports)
9. MIC (Phantom power 24V), LINE, and AUX INPUT

## | Sound Source |

1. AM/FM TUNER, MEDIA (CD/DRP/USB), 5 External MIC / LINE Inputs
2. Anti-shock CD player with 3-beam laser pick-up
3. Playback source file of CD-DA, MP3, WMA
4. Built-in memory can store content of CD, and USB.
5. Chime & Siren broadcasting  
The Chime and Siren files can be changed according to user preference.
6. Scheduled broadcast of MP3 audio (Up to 30sec, bell, message)
7. Emergency broadcast and Messaging (Up loadable file source)  
During emergency broadcast, other groups can transmit general broadcast.

## | Ease of Use |

1. Software Control and Configuration
2. Built-in monitor speaker
3. Built-in EM MIC
4. Output port monitoring  
Audio monitoring is possible through the POST OUT A and POST OUT B terminals in the rear of the device.
5. DC24V emergency power and battery charger
6. Rack mounting available

## | Control of priority over-ride attenuator |

The PAC-5000A offers two methods of controlling priority over ride attenuators. Priority over-ride attenuators have a relay that allow bypassing the attenuator volume setting when a priority or emergency messages must be broadcasted. In this case, the PAC-5000A will send out a DC 24V that will energise the relay and allow the message to bypass at full volume regardless of the attenuator setting.

There are 2 types of override attenuators.

1. 3 wire share a common ground. (DC 24V, Common ground and signal)
2. 4 wire share a separate ground. (DC 24V, Relay ground, signal and signal ground)

## Efficient Device Operation Control

Remote operation control of the PAC-5000A is available using a PC software. The GUI of the PAC-5000A provides the operation of most of the front panel features including device settings, and efficiently manage current operation status.



The PC Software allows you to setup and configure the Security, Date/Time Schedule, Volume and 7 Band EQ, Timed Broadcast Automation, Firmware Update. Through the PC Software interface, you can easily select the desired channel to broadcast.



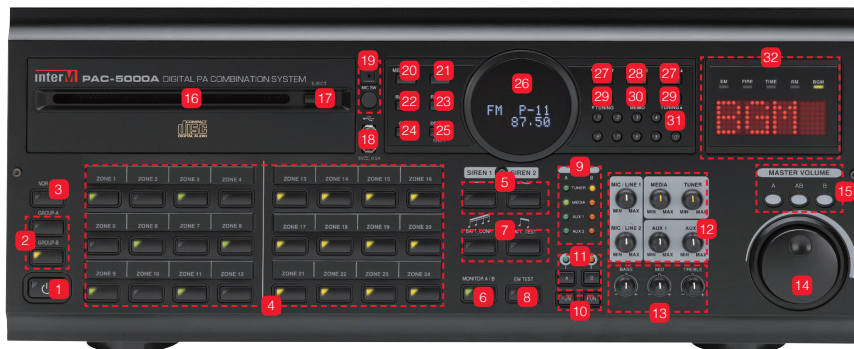


## | FEATURES |

- Output Power: 600W (2 x 300W)
- 24 Outputs (2 x groups of 12)
- 6 x Mic Inputs (3 pin XLR)
- 3 Aux Inputs (Stereo phono)
- Internal Tuner and CD Mechanism
- In-built Monitor Loudspeaker
- Telephone Input
- Record Input
- Pre Amp Output
- RS232C PC Interface
- AC 100–240V, 50/60Hz or DC 24V
- 440(W) X 177(H) X 380(D)
- 11.1kg

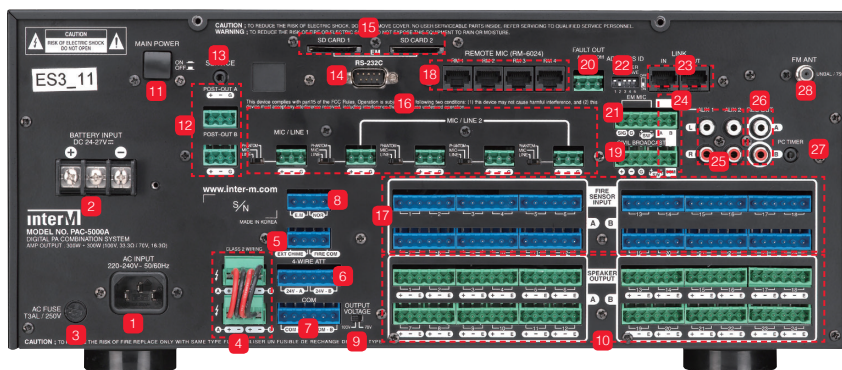


## | Front Panel |



- |  |  |   |
|--|--|---|
| 1 POWER SWITCH                                     | 10 BGM INPUT SELECT BUTTON (FUN.)                          | 20 MEDIA FUN. BUTTON                    |
| 2 GROUP SELECT BUTTON<br>(GROUP – A, GROUP – B)    | 11 MIC/LINE SELECT BUTTON (A, B) AND<br>INDICATOR LED      | 21 INFO. BUTTON                         |
| 3 NOR / EM BUTTON                                  | 12 EQ ADJUSTMENT   | 22 RANDOM BUTTON                        |
| 4 SPEAKER ZONE SELECT BUTTON<br>(ZONE 1 ~ ZONE 24) | 13 INPUT VOLUME LEVEL ADJUSTMENT                           | 23 REPEAT BUTTON                        |
| 5 SIREN BUTTON (SIREN 1, SIREN 2)                  | 14 MASTER VOLUME CONTROL                                   | 24 COPY BUTTON                          |
| 6 MONITOR SPEAKER SELECT<br>BUTTON (MONITOR A/B)   | 15 SELECT VOLUME CONTROL                                   | 25 DELETE BUTTON                        |
| 7 CHIME SELECT BUTTON                              | 16 CD SLOT   | 26 DISPLAY WINDOW                       |
| 8 EMERGENCY BROADCAST TEST<br>BUTTON (EM TEST)     | 17 EJECT BUTTON  | 27  ◀◀ (▼PRESET) / ▶▶  (PRESET▲) BUTTON |
| 9 BGM INPUT INDICATOR LED                          | 18 USB TERMINAL  | 28 ▶LL (PLAY / PAUSE) / FM MUTE BUTTON  |
|  | 19 EMERGENCY MIC (EM MIC) AND<br>OPERATION SWITCH (MIC SW) | 29 ◀◀ (▼TUNING) / ▶▶ (TUNING▲) BUTTON   |
|  |  | 30 ■ (STOP) / MEMO BUTTON               |
|  |  | 31 NUMBER BUTTONS (0~9)                 |
|  |  | 32 SYSTEM OPERATION INDICATOR           |

## | Rear Panel |



- |   |  |  |
|---|--|--|
| 1 POWER INPUT (AC INLET)                        | 13 SERVICE TERMINAL                                | 23 LINK IN / LINK OUT TERMINAL                     |
| 2 DC POWER INPUT AND BATTERY<br>CHARGE TERMINAL | 14 TELECOMMUNICATION TERMINAL                      | 24 AUX1 INPUT JACKS AND CONTACTS                   |
| 3 AC FUSE                                       | 15 SD MEMORY CARD SLOT (SD CARD 1/2)               | 25 AUX INPUT TERMINAL                              |
| 4 AMP IN/OUT TERMINAL                           | 16 LINE / MIC INPUTS AND INPUT<br>SELECTION SWITCH | 26 REC OUT TERMINAL                                |
| 5 EXT CHIME/ FIRE COM                           | 17 FIRE SENSOR INPUT TERMINAL                      | 27 RESERVED BROADCAST INPUT TERMINAL<br>(PC TIMER) |
| 6 24V – A/24V – B TERMINAL                      | 18 REMOTE MIC CONNECT TERMINAL<br>(RM 1 ~ RM 4)    | 28 FM ANTENNA TERMINAL (FM ANT)                    |
| 7 COM TERMINAL                                  | 19 PRIORITY INPUT TERMINAL                         |  |
| 8 CONTROL OUT TERMINAL                          | 20 FAULT OUT TERMINAL                              |  |
| 9 OUTPUT VOLTAGE SELECT SWITCH                  | 21 EM MIC / SWITCH CONNECT TERMINAL<br>(EM MIC)    |  |
| 10 SPEAKER OUTPUT CONNECT TERMINAL              | 22 ADDRESS SET SWITCH (ADDRESS ID)                 |  |
| 11 MAIN POWER SWITCH (MAIN POWER)               |  |  |
| 12 POST OUTPUT Terminal (POST-OUT A/B)          |  |  |

## | APPLICATION |

Applications include BGM, background music or paging. Ideal for use in a small place such as the classroom, training center, restaurant, and cafe.

- Restaurants and Lounge
- K through 12
- Retail Shops
- Coffee shops
- Higher education
- Seminar rooms and lecture halls
- Department Stores



## | RELATED PRODUCTS |



- Data, audio, and dc power supplied through one cat 5 cable.
- 24 Zones of Paging expandable to 24 using the SR-100KP.
- Built-in Pre-announce chime.
- All zone broadcasting and monitoring.
- External source input.

## | ACCESSORIES |

- BKT-PAC5000 (19inch 1u Rack mount Kit)

## | Specifications |

PAC-5000A	
POWER AMP (AUX IN @ 1kHz, 100V/83Ω LOAD OUTPUT)	
Rated Output (@ T.H.D 1%, GROUP A + GROUP B)	300W + 300W
Input Sensitivity	-10 ±3dBV
S/N (20kHz LPF, A-WTD)	Better than 75dB
EQ Control (250Hz, 1kHz, 7kHz)	-10 ±3dB
Frequency Response (1W Power Output, 0±3dB)	50Hz ~ 20kHz
MIC/LINE 1-5CH (MIC/LINE IN @ 1kHz, POST OUT, MIC/LINE VR Max. Master VR Max.)	
MIC Input Sensitivity	-55dBV / 10kΩ
MIC S/N (20kHz LPF, A-WTD)	Better than 80dB
MIC Frequency Response (0±3dB, 80kHz LPF)	50Hz ~ 20kHz
MIC Phantom Power	+24V
MIC T.H.D (20kHz LPF)	Less than 0.5%
LINE Input Sensitivity	-10 ±3dBV
LINE S/N (20kHz LPF, A-WTD)	Better than 80dB
LINE T.H.D (20kHz LPF)	Less than 0.3%
CD (TEST CD 0dB, 1kHz @ REC OUT, CD VR Max. Master VR Min.)	
S/N (20kHz LPF, A-WTD)	Better than 75dB
Frequency Response (0±3dB, 80kHz LPF)	100Hz ~ 20kHz
TUNER (FM, 22.5kHz MOD @ REC OUT, TUNER VR Max. Master VR Min.)	
S/N (20kHz LPF, A-WTD)	Better than 55dB
Frequency Response (0±3dB, 80kHz LPF)	100Hz ~ 9.5kHz
OUTPUT LEVEL (AUX IN, INPUT -10dB/1kHz)	
REC OUT (AUX VR Max. Master VR Min.)	-10 ±2dBV
POST OUT (AUX VR Max. Master VR Max.)	0 ±2dBV
LINK IN/OUT , REMOTE MIC (RM 1-RM 4) INTERFACE	
Configuration	RS-485 Serial
Interface Distance	≦ 500M
Cable Type	Category 5 UTP Cable
Priority Control	EM MIC → FIRE → PRIORITY INPUT → EM → PC TIMER → REMOTE MIC → SIREN, CHIME → MIC1 → MIC2-5 → BGM
Fire Sensor	24CH
Operation temperature	-10°C ~ +40°C
Power Source	AC 100-240V, 50/60Hz or DC 24V
Power Consumption	Better than 135W (1/8)
Weight (SET)	11.1kg / 24.4lb
Dimension (SET)	440(W)×177(H)×380(D)mm / 17.3(W)x 7(H) x 14.96(D) in



**Inter-M Corp. (IMK)**

719, Dobong-ro, Dobong-gu, Seoul, Korea  
Overseas Sales Team

**Tel\_** +82-2-2289-8141~7    **Fax\_** +82-2-2289-8149    **E-mail\_** overseas@inter-m.com

**www.inter-m.com**

※ Design and specification are subject to be changed for the improvement of product quality without pre notice.

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