

Operation Manual

1CH/2CH Digital Power Amplifier
DPA-130DC/230DC



interM

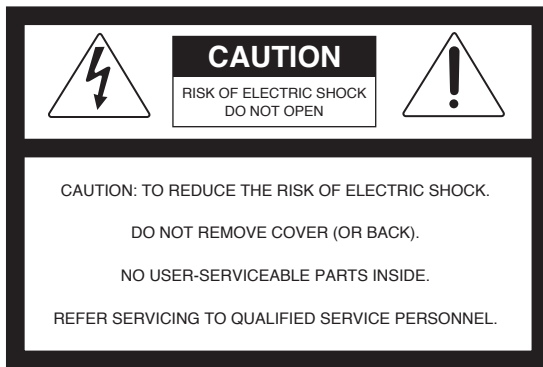
Welcome

A personal welcome to you from the management and employees of Inter-M

All of the co-workers here at Inter-M are dedicated to providing excellent products with inherently good value, and we are delighted you have purchased one of our products.

We sincerely trust this product will provide years of satisfactory service, but if anything is not to your complete satisfaction, we will endeavor to make things right.

Welcome to Inter-M, and thank you for becoming part of our worldwide extended family!



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

*WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING-WATER AND MOISTURE: Unit should not be used near water(e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so than objects do not fall and liquids are not spilled into the enclosure through openings.

*CLASS 2 WIRING (Adjacent to speaker terminal): The speaker output of this apparatus can exceed 10 Watts and could be a shock injury. Connection to speakers should be performed by a skilled person.

*Do not install this equipment in a confined space such as a book case or similar unit.

*This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such vases, shall be placed on the apparatus.

*This apparatus shall be connected to a mains socket outlet with a protective earthing connection.

*It has heed to be easy to disconnect the device. To disconnect the device from power, separate AC input cable from inlet or unplug the AC Cord.

CAUTION

*These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

NOTE

*This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attentions: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

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Unpacking

Although your DPA-130DC/230DC is neither complicated nor difficult to operate, we recommend you take a few minutes to read this brief manual and familiarize yourself with the important information regarding product features, setup and operation.

As with most electronic devices, we strongly recommend you to retain the original packaging. In the unlikely event the product must be returned for servicing, the original packaging (or reasonable equivalent) is required.

Installation

Environment

Never place this product in an environment which could alter its performance or reduce its service life. Such environments usually include high levels of heat, dust, moisture, and vibration.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



Features

- 1U rack size
- High power PA amplifier, 300W(DPA-130DC) /300W x 2(DPA-230DC)
- Operating for Emergency power (DC 24V)
- Independent SMPS(switching-mode power supply) for each channel
- Low power consumption, low heat dissipation and light weight
- High quality (THD less than 0.03% for 100W and less than 0.03% for 300W, S/N. over than 100dB)
- Protection circuitry (over heat, over current, speaker short, DC protection)
- High-pass filter switch (65Hz / 400Hz)
- Various displays (-30dB, -10dB signal level, signal clip, protection LED indicator)
- Balanced input
- Remote power control
- Parallel mode
- select the of volume control range ($-\infty$ or -12dB)
(Service personnel only)

Accessories

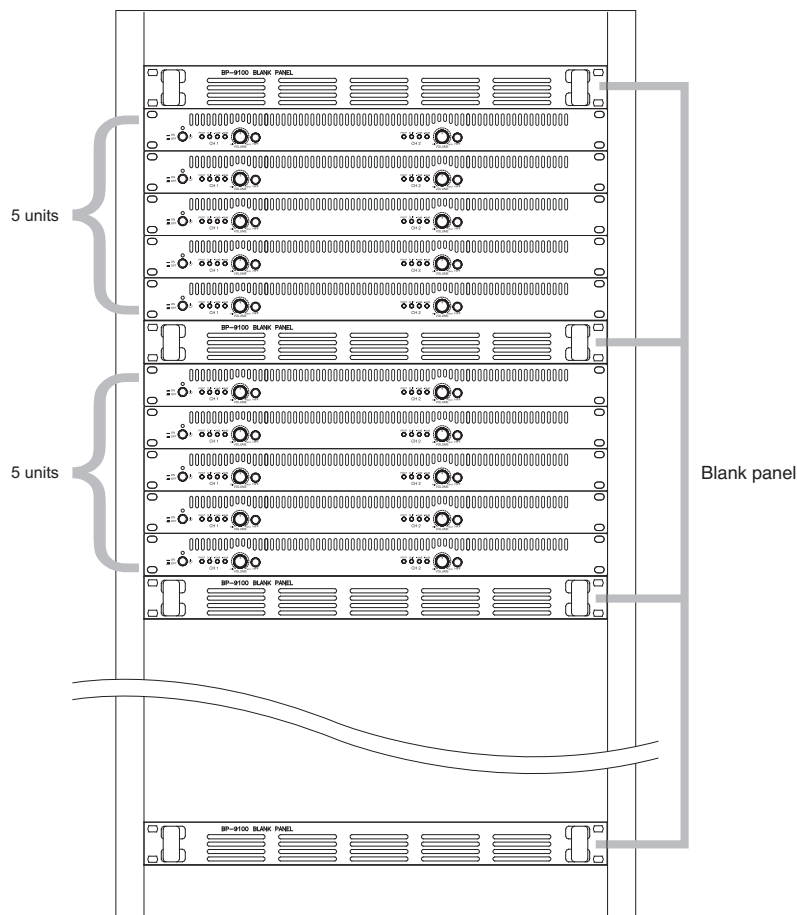
- AC power cord x1
- 3P Terminal Block x 2 (DPA-230DC) or 3P Terminal Block x 1 (DPA-130DC)
- 2P Terminal Block x 3 (DPA-230DC) or 2P Terminal Block x 2 (DPA-130DC)
- Rack mount screws x 4
- Foot x 4
- Washer x 4

Precautions

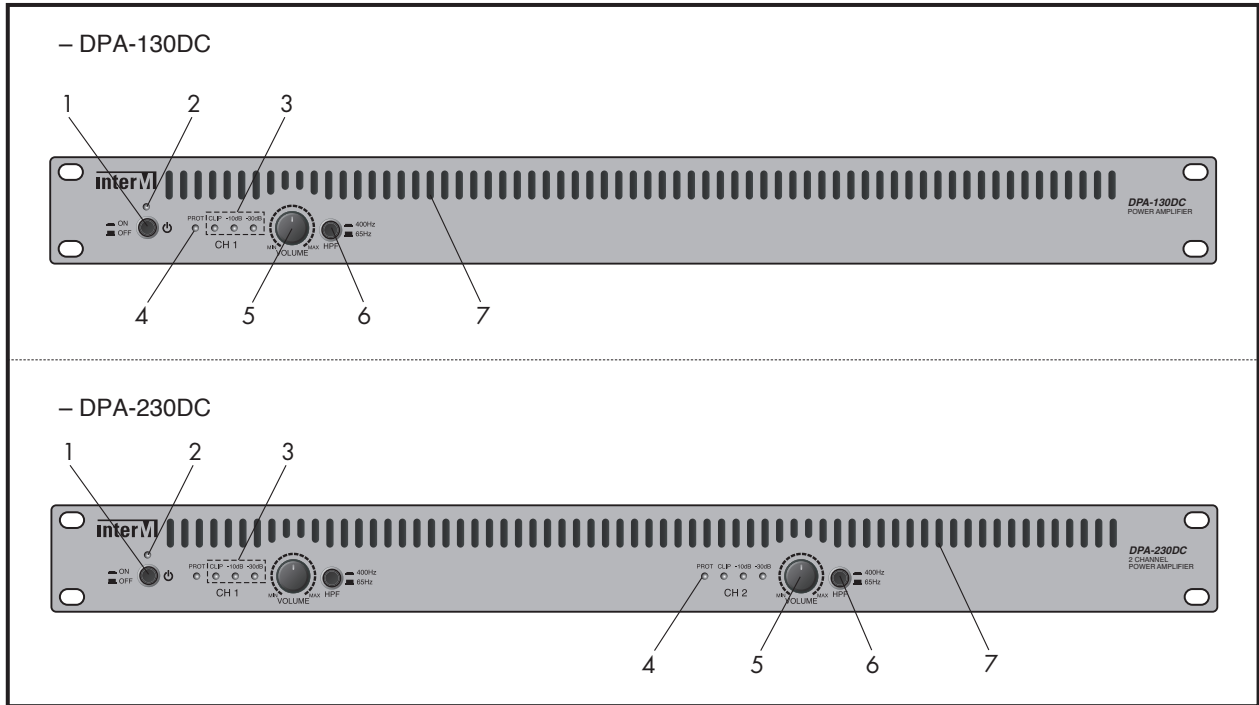
1. Do not connect outputs of two or more channels in parallel.
2. Do not connect speakers with a smaller impedance than specified to avoid the damage of the unit.
3. Keep the input cable away from the output cable.

Installation Precautions

1. When mounting the unit in a rack, the inside of the rack must be sufficiently ventilated.
To achieve sufficient ventilation, remove panel on the rear of the rack or use Fan at the top of the rack.
2. When mounting the unit in the rack, mount a Blank Panel at the top and the bottom of the rack and above and below every 5 units.



Front Panel



1. POWER SWITCH

Pressing this switch turns the unit on.
Pressing it again turns the unit off.

2. POWER LED

When the unit is powered on, the Power LED lights Green.
When the power is off, the Power LED lights Red.

3. OUTPUT LEVEL INDICATOR

The -30dB LED lights green when an output signal level exceeds about -30dB .
The -10dB LED lights green when an output signal level exceeds about -10dB .
The CLIP LED lights amber when an output signal clips (distortion occurs).

NOTE: Do not operate the unit with the CLIP LED continuously on.
Decrease the volume level to avoid signal clipping.

4. PROTECTION INDICATOR

PROT indicator lights red when the protection circuitry is activated.
When the power is turned on, the PROT indicator lights for about 2 seconds.

5. VOLUME CONTROL

Adjust the input level of each channel.

To increase the volume level, turn the volume clockwise.

The volume control range can be set both 0dB ~ -12dB and 0dB ~ minimum by changing the volume range setting switch internally. (See page 9).

NOTE: Service personnel only.

6. HIGH PASS FILTER SWITCH

Pressing the switch turns on the high pass filter.

The corner frequency (-3dB) is 65Hz when the high pass filter switch is off or 400Hz when the high pass filter switch is on.

NOTE: When the unit is connected with horn speaker, the high pass filter must be set to ON.

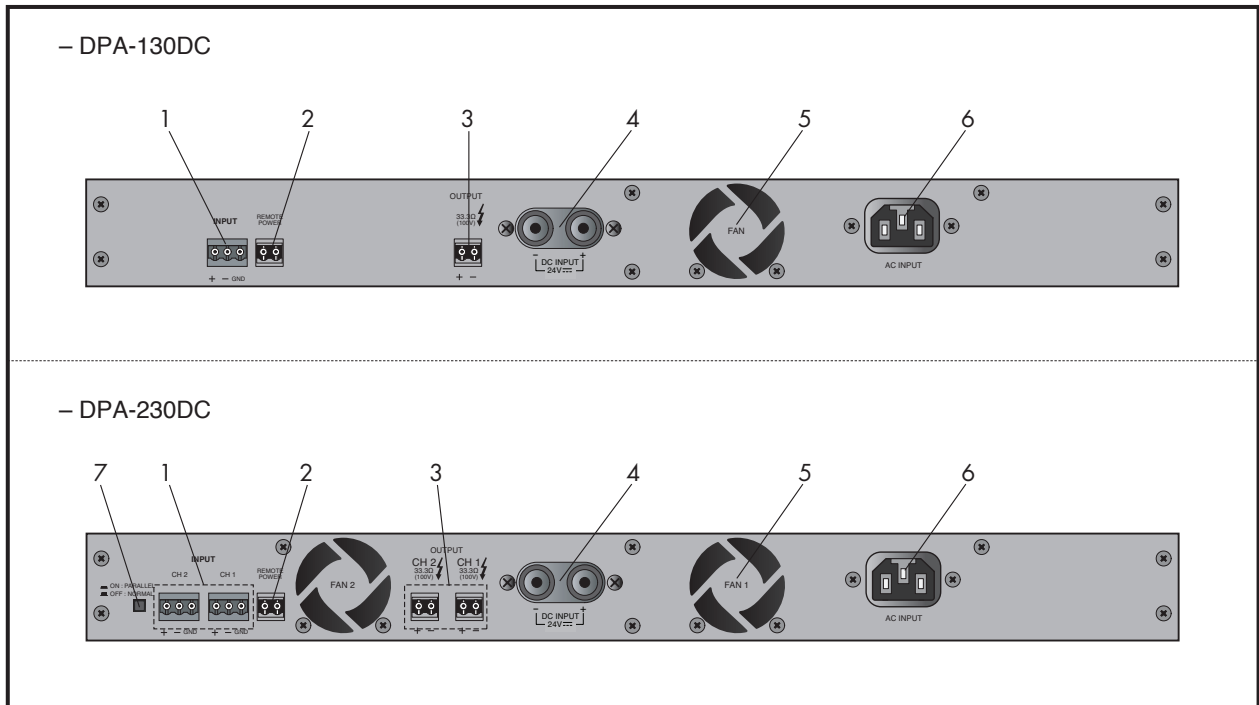
If not use the high pass filter, it may damage the connected speakers, possibly resulting in fire.

7. VENTILATION

It is the air vents. Do not stuck the ventilation panel to secure enough cooling.

Inside the ventilation panel, there is a dust filter. To clean the filter, remove the front panel and clean the dust filter.

Rear Panel



1. INPUT TERMINALS

Connect signal input cables to these terminals.

The input circuitry is balanced type. (+ : Hot, - : Cold, GND: Ground)

2. REMOTE POWER TERMINAL

You can control the amplifier by the remote control while amplifier is power off.

3. SPEAKER OUTPUT TERMINALS

Connect speaker cables to these terminals.

Only connect speakers with an impedance equal to or greater than those specified below.

Country	Speaker Output	Speaker Impedance
Europe	100V	33.3Ω

NOTE: Connecting speakers with a smaller impedance than specified could damage the unit.

4. DC TERMINAL

It is the battery (24VDC) connecting terminal for the emergency broadcasting.

In case of AC power failure, the device will be operated with the connected backup battery.

5. FAN

It is the cooling fan vents.

When inner temperature reaches the certain level, the speed of the fan gets faster.

Please give attention not to block the vents when install the unit.

6. AC INLET

Connect the supplied power cord to this inlet.

7. PARALLEL SWITCH(DPA-230DC ONLY)

- NORMAL MODE

It operates on NORMAL MODE when switch is off. CH1 and CH2 are received different input signals each channel, and volume operate separately.

- PARALLEL MODE

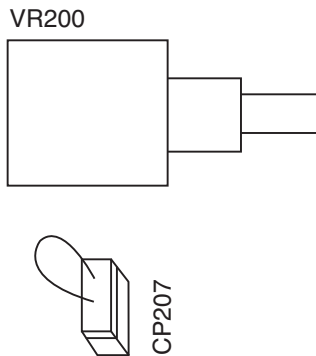
It operates on PARALLEL MODE when switch is on. CH 1 and CH 2 are received same input from input CH 1 (do not use input CH 2), it is able to control the volume separately.

Volume Range Setting

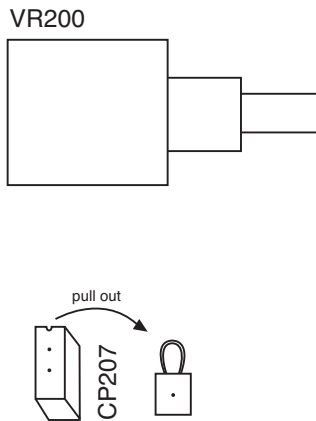
The volume control range can be set both 0dB ~ -12dB and 0dB ~ minimum by changing the volume range setting internally.

NOTE: Service personnel only.

1. Volume Range: 0dB ~ minimum (factory default)



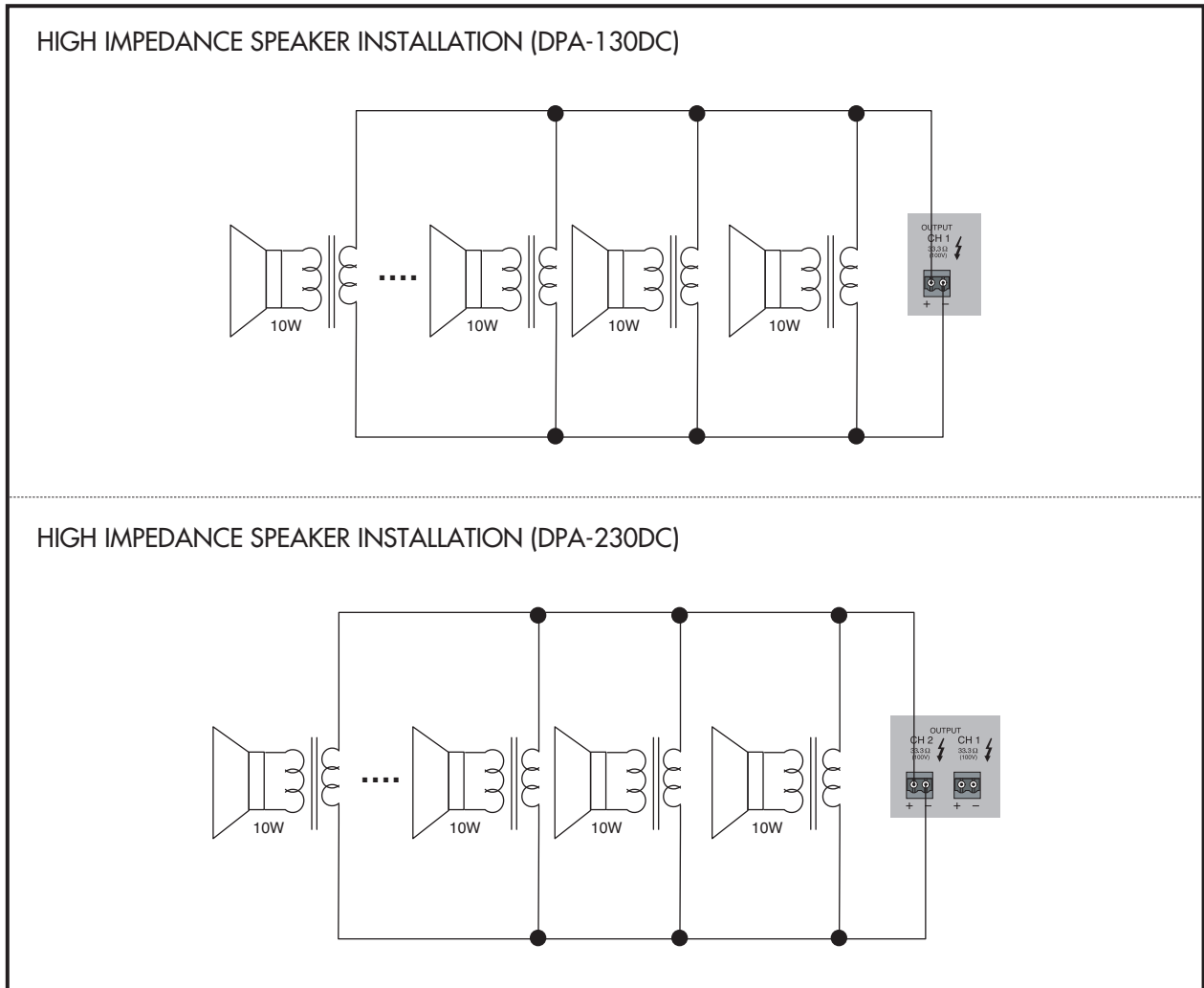
2. Volume Range: 0dB ~ -12dB



To change the volume range from 0dB ~ minimum to 0dB ~ -12dB, pull out the connector connected to the CP207.

Connecting Speakers

Before connecting speakers, disconnect the AC power cable. Note the proper connecting terminals as below. Make sure that the total impedance is not less than the rated impedance indicated.

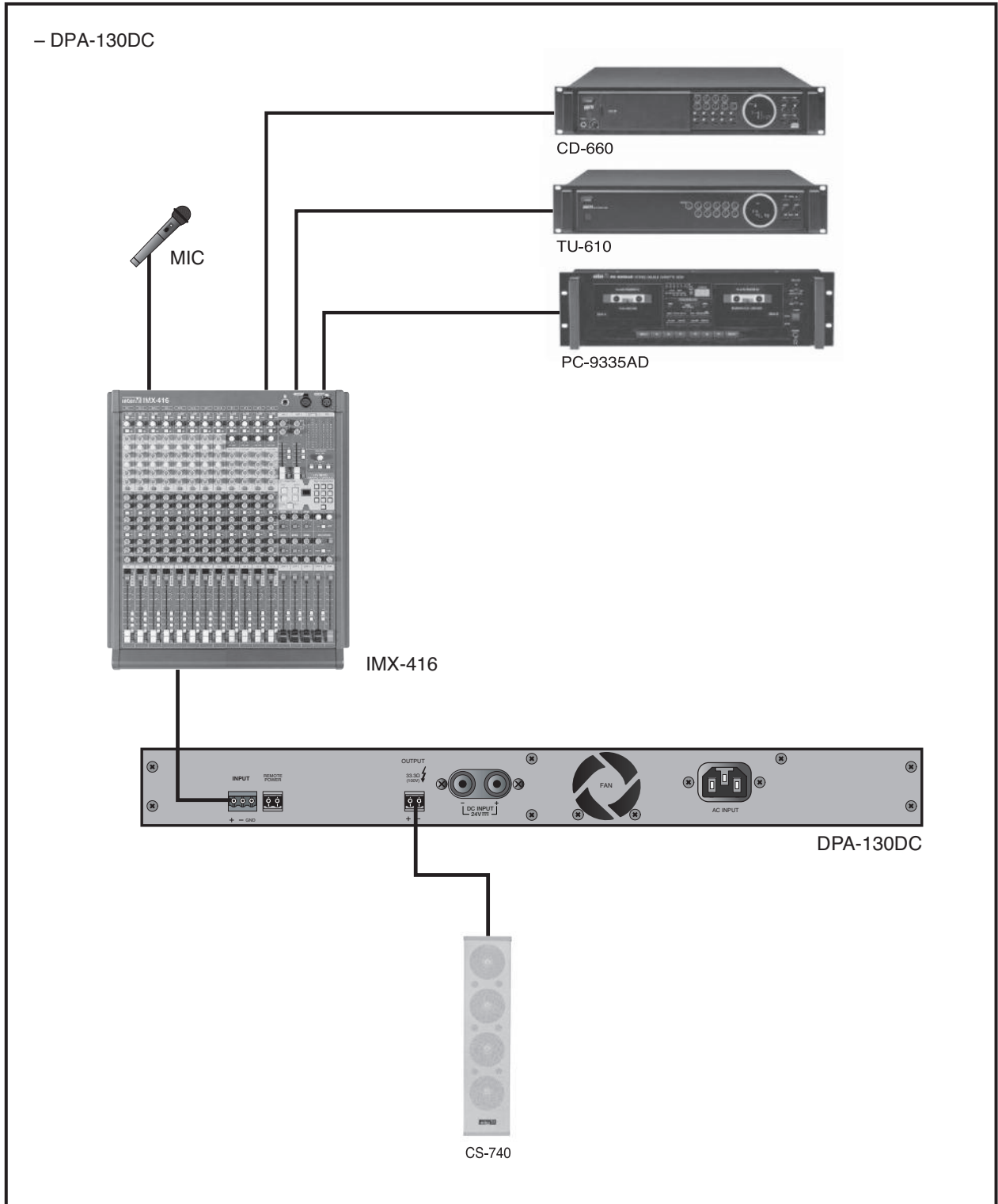


Only connect speakers with an impedance equal to or greater than those specified below.

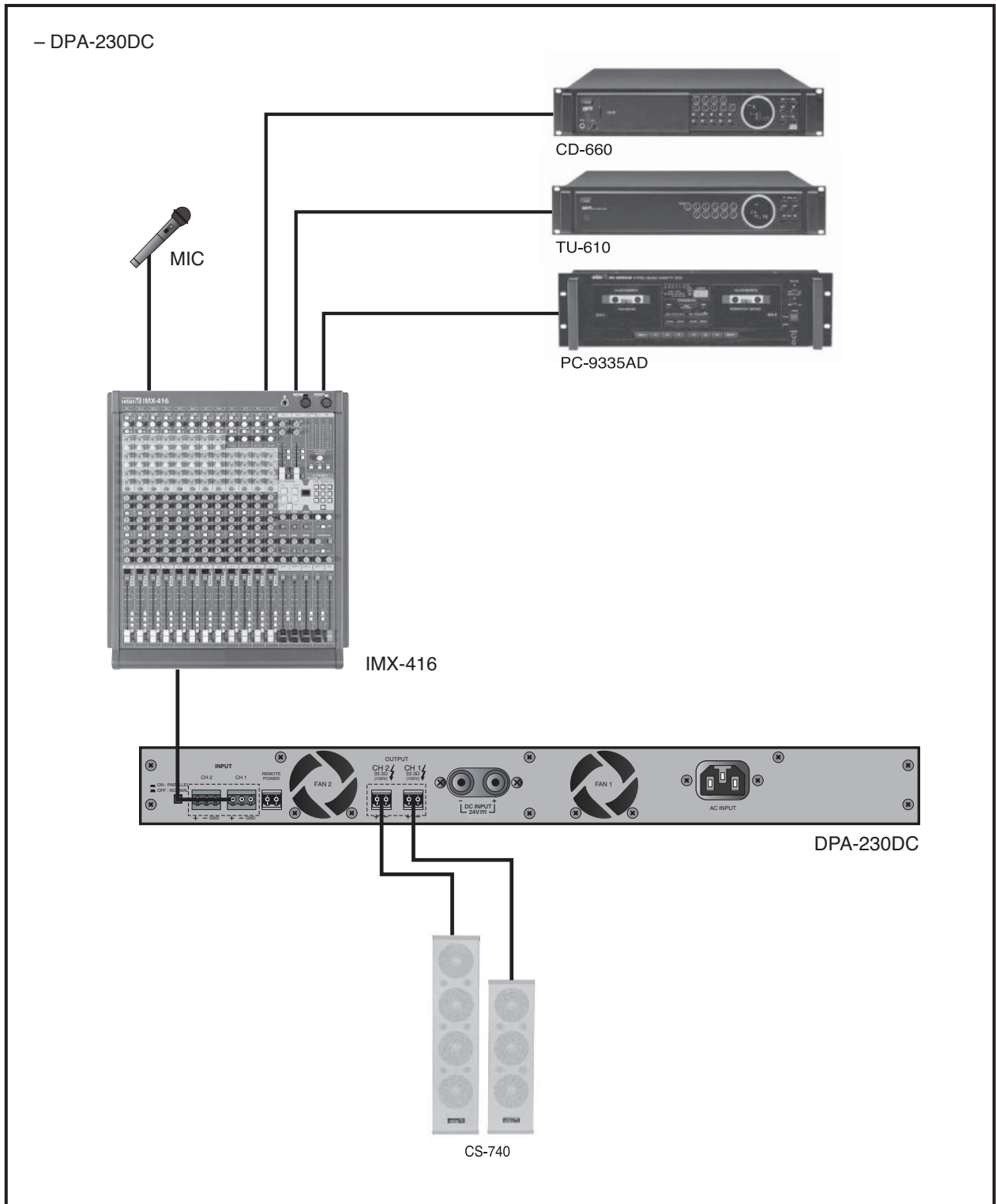
Country	Speaker Output	Speaker Impedance
Europe	100V	33.3Ω

- NOTE :**
1. Connecting speakers with smaller impedance than specified could damage the unit.
 2. Do NOT connect low impedance speakers such as 4Ω, 8Ω etc to these speaker terminals, it could causes damage to the unit.
 3. Do not connect outputs of two or more channels in parallel.
 4. Keep the output cable away from the input cable.

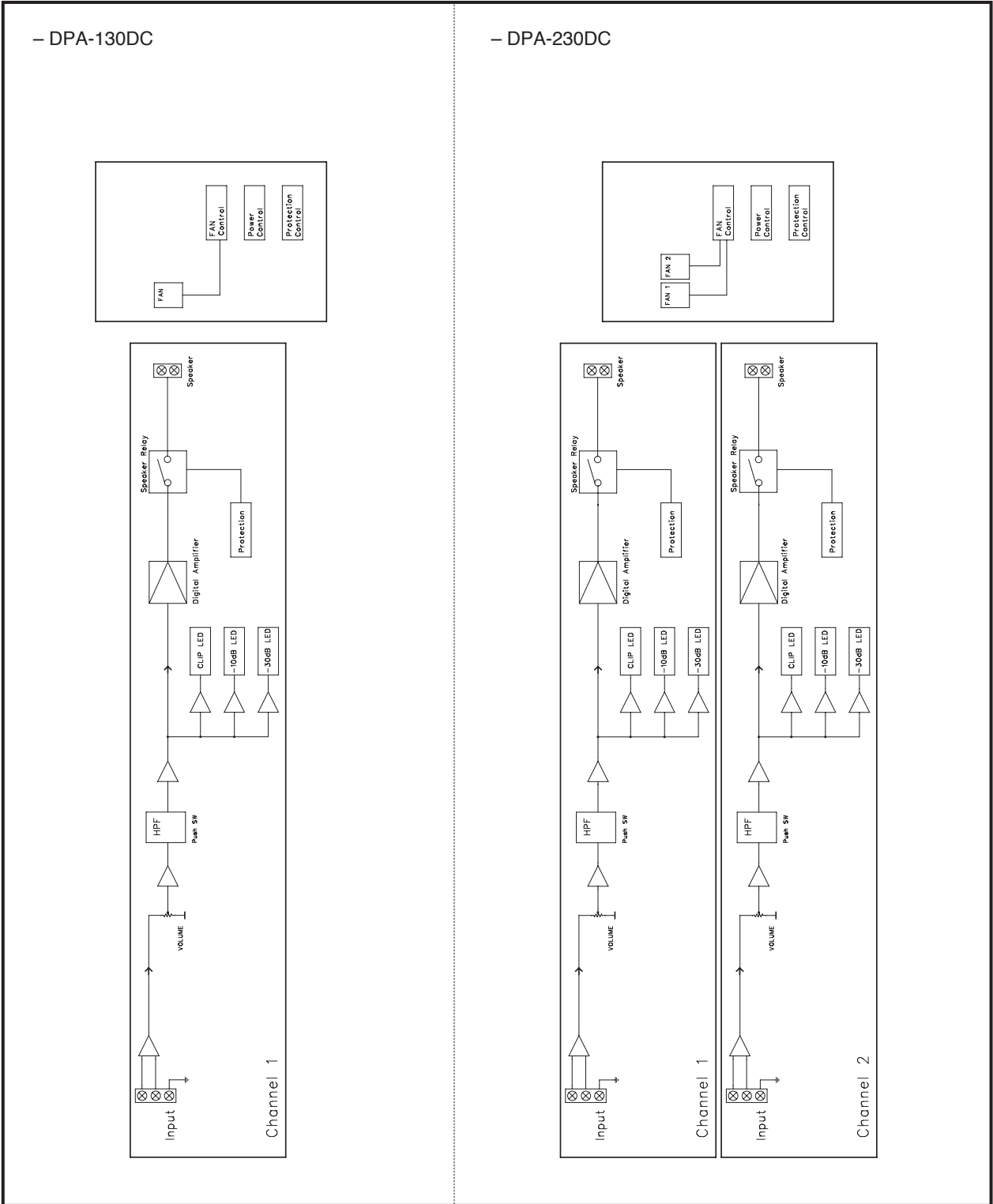
Applications



Applications



Block Diagram



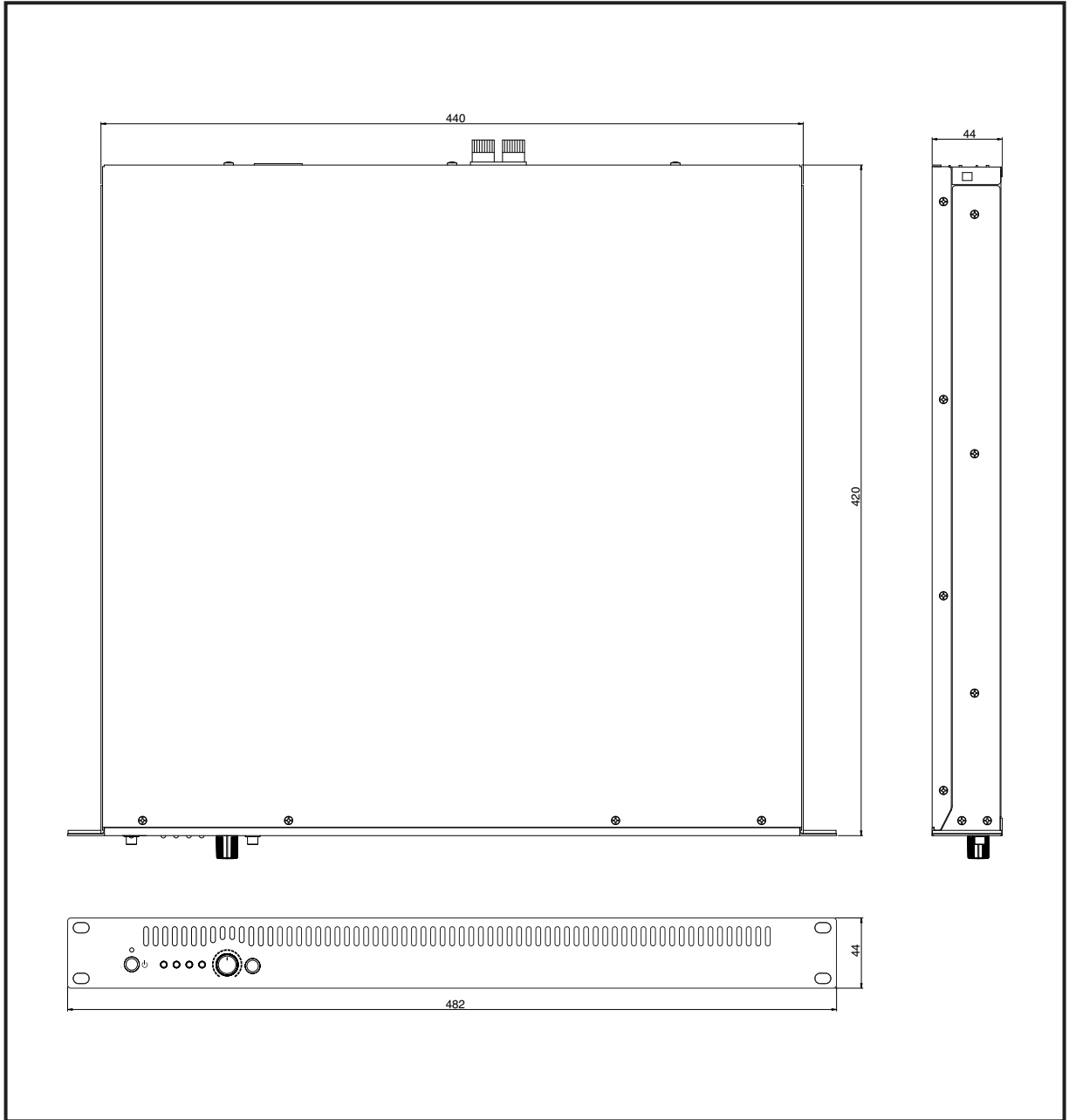
Specifications

	DPA-130DC	DAP-230DC
Rated Output Power (1kHz, 33.3Ω)		
Rated Output Power (T.H.D 0.1%, AES17)	300W	300W x 2CH
Output Voltage/Impedance	100V / 33.3Ω	
Input Sensitivity/Impedance	1V / 10 KΩ Balance	
T.H.D (ASE17)		
Rated (300W, 1kHz)	Less than 0.1 %	
$\frac{1}{3}$ Prated (100W, 1kHz)	Less than 0.03%	
S/N (20kHz LPF, A-WTD)	Over than 100 dB	
High Frequency Response (1W ,+1dB, -3dB)	Over than 20 kHz	
Low Frequency Response (1W, -3dB±2dB)		
High Pass Filter Off	65Hz	
High Pass Filter On	400Hz	
Operating Temperature	-10°C ~ +40°C	
Power Source	DC24V, AC 220-240V 50/60HZ	
Power Consumption ($\frac{1}{8}$ Pmax)	150W	
Weight (Set)	6.8kg / 14.9lb	8.3kg / 18.2lb
Dimensions (Set)	482(W) x 44(H) x 420(D)mm/19(W) x 1.7(H) x 16.5(D)in	

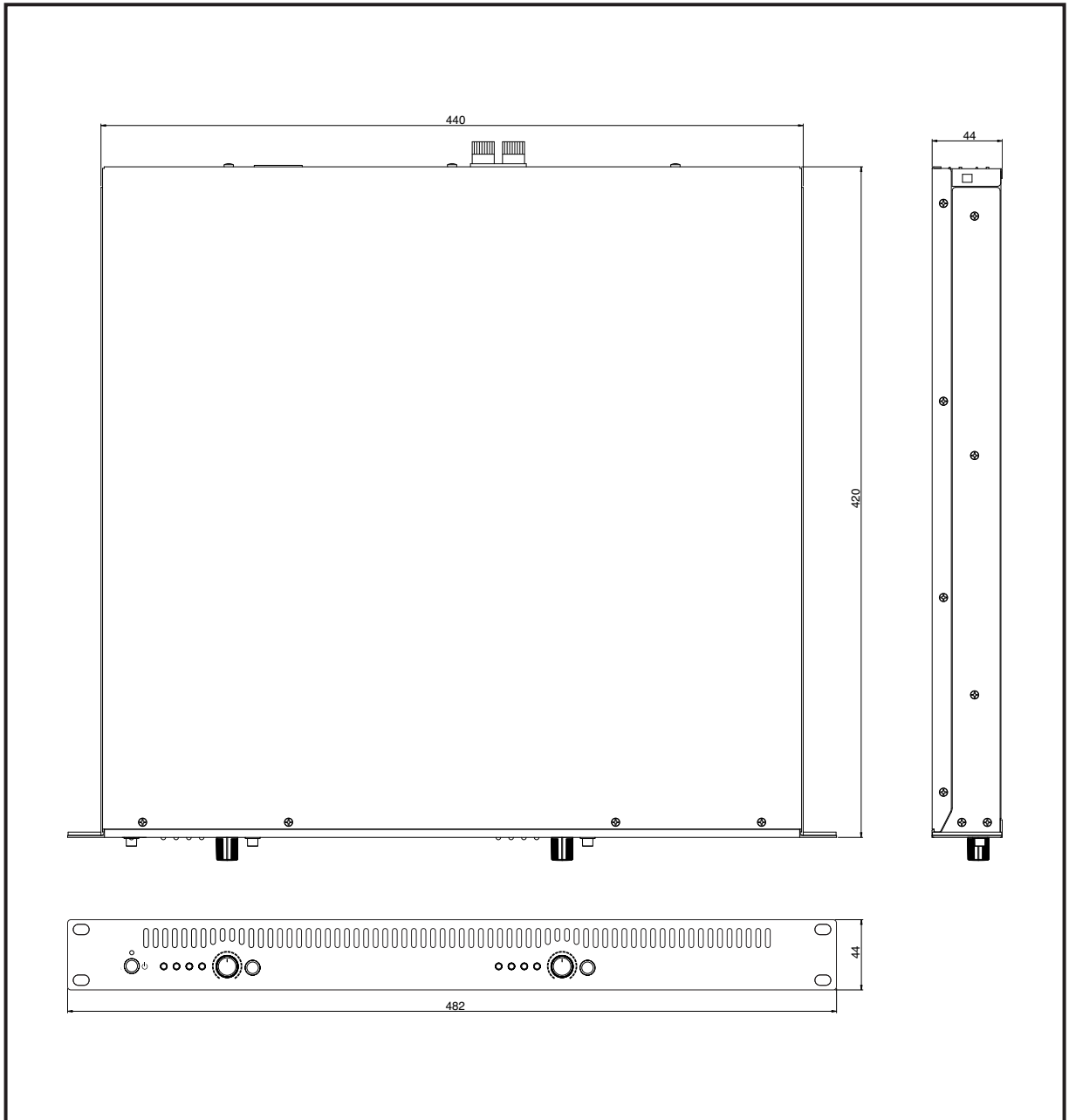
* Specifications and design subject to change without notice.

* Power consumption is different that depending on number of amplifier modules.

※ DIMENSIONS (DPA-130DC)



※ DIMENSIONS (DPA-230DC)



Service

Procedures

Take steps to insure the problem is not related to operator error or other products within the system. Once it is certain that the problem is related to the product, contact your warranty provider as described in the warranty section of this manual.

Variations and Options

Variations

Variations of this product exist to reflect the variations in AC power requirements throughout the world. Product supplied through local sources are compatible with local AC power requirements.

Options

No optional items are available for this product.

Warranty

Warranty terms and conditions vary by country and may not be the same for all products. Terms and conditions of warranty for a given product may be determined first by locating the appropriate country which the product was purchased in, then by locating the product type.

To obtain specific warranty information and available service locations, contact Inter-M directly or the authorized Inter-M Distributor for your specific country or region.

interM



Inter-M, Ltd. (Korea) began operations in 1983.

Since then, Inter-M has grown to become one of the largest manufacturers of professional audio and commercial sound electronics equipment in the world.

Inter-M has gained worldwide recognition for its own branded products, as well as private label manufacturing of electronics sold under other names (OEM).

The company is no longer just a Korean company, but rather a global company that is truly international in scope, with factories and offices in Korea and China, and sales and marketing operations located in Japan, Europe, and the U.S.A.

With more than 850 employees around the globe, Inter-M is well-poised for further growth and expansion.

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