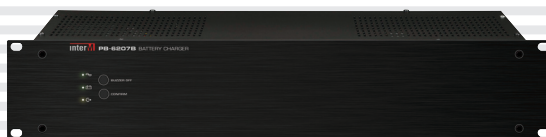


Operation Manual

Battery Charger **PB-6207B**



* Rack mount products in the Western Hemisphere(North America, South America, and the Caribbean) do not have handles installed due to customer preference.

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!



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.

WARNING

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

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.
Pour déconnecter complètement l'appareil du réseau d'alimentation, déconnecter le cordon d'alimentation de la prise murale.
La prise du réseau d'alimentation doit demeurer aisément accessible.

*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 that objects do not fall and liquids are not spilled into the enclosure through openings.

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

*Warning : To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture and objects filled with liquids, such as vases, should not be placed on this apparatus.

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

*To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.

*The mains plug of the power supply cord shall remain readily accessible.

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.

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Unpacking

Although your PB-6207B 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 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.



S3125A

Features

- AUTOMATIC CHARGING

When charging, it is charged up to 10A according to the internal setting value, and the current decreases as it approaches the full charge voltage (27.3V@25°C, overseas model), and the current drops at full charge to maintain the charged state.

- AC/DC/BATT STATUS DISPLAY

AC/DC/BATT abnormality can be monitored through the front two-color LED and rear NO/NC contact terminals.

- MONITORING CHARGING STATUS

User can monitor the charging voltage through a windows program.

Operating Method

1. Before using, check that the power voltage (AC 220-240V, 50/60Hz) is correct and connect to a power outlet.
2. Connect the battery fuse breaker to the battery input terminal of this device, connect the 24V battery, and turn on the battery fuse breaker.
3. When power is applied. After checking whether the battery voltage is within the charging range ($16V \leq VBATT \leq 28.5V$), charging starts.
4. If the battery connected to the device is completely discharged, it will not be charged.

Equipment Setting and Checking

1. Address Setting

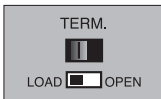


- 1) Set the equipment numbers for each deciding condition using the rear panel DIP switch.
 - If the number is already in-use, the system will not function properly.
 - Please check the equipment number set-up status. (can be expanded up to 15 equipments)
- 2) Setting should be as table below, and if data number is added to switch which is On, it will be the equipment number.

Pin No.		1	2	3	4
Data		1	2	4	8
Address	1	ON			
	2		ON		
	3	ON	ON		
	4			ON	
	5	ON		ON	
	15	ON	ON	ON	ON

(Ex: when number 1 and 3 is ON, 1 and 4 is added, so equipment number will be 5.)

2. TERMINATION Switch (LOAD/OPEN) Setting

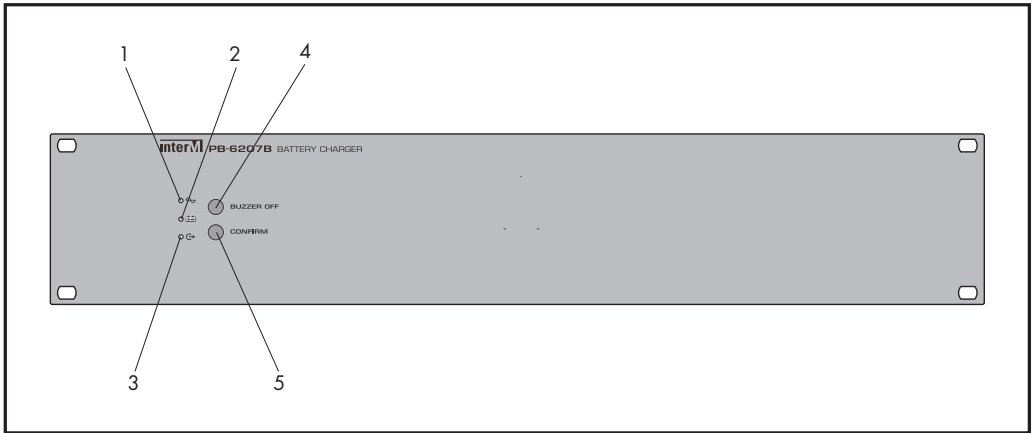


- 1) For the system linked by using RS-485 communication interface, it is necessary to set the termination switch (LOAD/OPEN) on the rear panel to stabilize data transfer.
- 2) Set the termination switch to LOAD only for the first and last-numbered equipment units. All others must be set to OPEN.



※ Caution: Communication error may occur if setting is performed incorrectly.

Front Panel



1. AC LED

Indicates AC operation and device status. The green light turns on in normal condition, and the orange warning light turns on when an abnormal situation occurs.

- Orange lights up in the following situations:
 - AC voltage threshold < 176 VAC or > 264 VAC ($\pm 10\%$)
 - AC fuse (F101) is blown.
 - Device failure.
 - The temperature inside the device is too high.

2. BATT LED

Indicates the battery status. The green light turns on in normal condition, and the orange warning light turns on when an abnormal situation occurs.

- Orange lights up in the following situations:
 - When the battery is not connected.
 - If the internal impedance of the battery is too high
 - AC power is present and in normal use
- If the battery voltage is as below:
 $VBATT < 21.6VDC \pm 10\%$ or $VBATT > 30.5VDC \pm 10\%$
 If the battery is connected in the reverse direction when operating the system

3. DC LED

Displays the output voltage status. The green light turns on in normal condition, and the orange warning light turns on when an abnormal situation occurs.

- Orange lights up in the following situations:
 - There is no voltage at one or more outputs.
 - Fuse (F401 or F201 to F206) is blown

The fault signal is displayed via 3 LEDs on the front as well as 3 contact outputs on the rear panel for remote monitoring.

4. BUZZER OFF BUTTON

- Beep

When each error signal occurs, a warning sound is generated together with the purpose of drawing the attention of the manager.

Short press the BUZZER OFF button once to turn off the beep

(※ Note: Errors are not cleared.)

When the status of each error signal changes, the beep sounds again if other warnings remain.

When all error conditions are resolved, the warning sound is automatically turned off.

- Cancellation and restoration of warning sound mode

To cancel the beep mode, press the BUZZER OFF button for about 5 seconds. The beep mode is released with a beep sound. To enter the beep mode again, press the BUZZER OFF button for about 3 seconds. It switches to the beep mode with a beep sound.

5. CONFIRM BUTTON

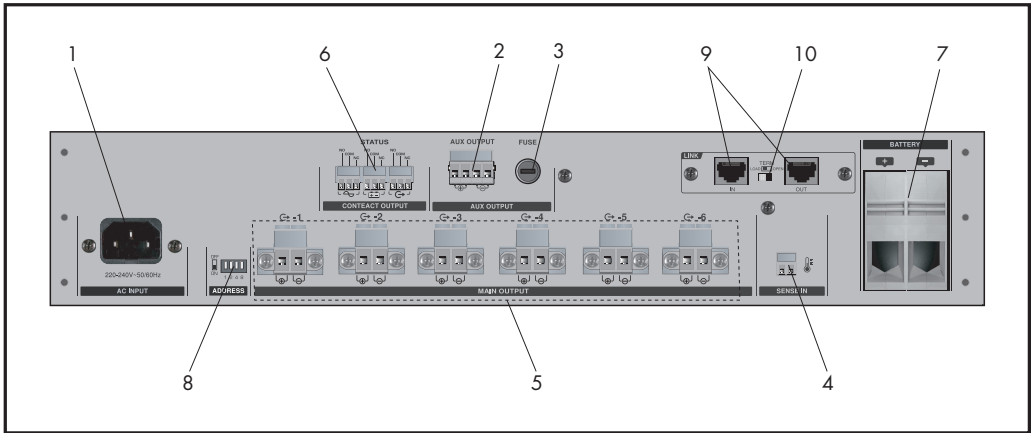
After applying AC power, the battery reaches the output voltage steady state for about 20 seconds. If the battery is connected, you can save the initial impedance value for checking the battery impedance by pressing the corresponding button.

During the first impedance confirmation, the BATT LED blinks green/orange several times.

If the impedance increases by about 100mohm from the stored value, a warning is activated when checking the impedance.

Impedance warning repeats with a short cycle of beeps.

Rear Panel



1. AC POWER INPUT TERMINAL

This is the terminal to connect the power cord. The power used is AC 220-240V 50/60Hz.

2. AUXILIARY OUTPUT (AUX) TERMINAL

Auxiliary output (up to 10A) is one terminal connecting devices without AC power input. The output is protected by a fuse (F401).

3. AUXILIARY OUTPUT (AUX) FUSE

It is the fuse for auxiliary output (Aux), and if error occurs in the device, it shuts off the Aux to protect the device. If you want to replace the fuse, please use the one which rated capacity is same.

4. TEMPERATURE SENSOR TERMINAL

This is the terminal to connect the sensor for detecting the battery temperature.

5. MAIN OUTPUT TERMINAL

6 output terminals for supplying backup power (up to 40A). The outputs are protected by fuses (F201 to F206). The maximum output for each terminal is 40A.

(※ Note: The sum of 6 main output terminals and auxiliary output terminals cannot exceed 120A.)

6. CONTACT OUTPUT TERMINAL

Contacts that accept 1A at 30VDC or 0.5A at 125VAC.

- 3-pole SPDT switch (NC- C -NO):
 - AC operation and device state (approximately 5 second delay after AC power failure).
 - Battery status.
 - Output voltage status.

7. BATTERY CONNECTION TERMINALS

This is the terminal for connecting the battery. Be sure to configure the connection with the battery fuse breaker before connecting, paying attention to the polarity. (up to 120A).

8. ADDRESS SETTING SWITCH

It is a switch to set the device number.

For the setting method, please refer to device setting and checking section.

9. LINK IN/OUT TERMINALS

It is a communication terminal for monitoring the charging voltage and current status of this device from a PC. The LINK IN terminal connects to the previous device and the LINK OUT terminal connects to the next device.

10. TERMINATION SWITCH (LOAD/OPEN)

This switch is set for stable data transmission/reception of LINK IN/OUT.

For detailed setting method, refer to device setting and checking.

(※ Caution: Communication error may occur if it is not set correctly.)

Equipment Setting and Checking details

1. INSTALLATION

Before installing the battery charger into a 19-inch rack, you must perform battery jumper settings.

1) Battery Jumper settings

The battery charging current can be set to 3A/5A/7A/10A according to the battery capacity.

In the factory default setting, the jumper is set to the '3A' position.

(※ Caution: Before installation, before all power is connected, it must be operated only by a qualified technician.)

2) Battery Connection

The total battery value must be 24VDC.

Observe the following when connecting multiple batteries.

- Use only batteries of the same voltage, capacity, type, brand and condition of aging.
- Always connect the batteries in series.
- Always check the relevant standards for details when connecting multiple batteries.
- Always use the battery fuse breaker as close to the battery as possible.

3) Connecting the temperature sensor

The battery charger has one socket for connecting the temperature sensor (included with the system).

- ❶ Insert the plug of the temperature sensor into the socket of the temperature sensor.
- ❷ Attach the sensor body close to the battery. A good thermal connection is essential for accurate temperature information.
For example, if you connect two 12V batteries in series, attach the sensor between the two batteries.

※ The applied charging voltage and current is temperature dependent. So always use a temperature sensor. If the temperature sensor is not used (or used incorrectly), the battery may be damaged or the battery life may be reduced.

※ If the temperature sensor is disconnected, disconnected or shorted, the voltage will be calibrated for 25°C.

4) AC Power Connection

The battery charger can be connected to 220-240VAC +/- 10%.

※ Use the battery fuse breaker to connect or disconnect the battery charger from the device.

2. CONFIGURATION

1) Battery Charging

In normal operating mode: The battery charger charges the battery and displays its status when fully charged. The maximum current that can be provided for battery charging (CHG) and auxiliary output (AUX) is 15A. When in backup operating mode: the battery provides the total operating current, which must not exceed 120A.

3. OPERATION

1) Working Principles

- The battery connection test is performed in the following way.
- The battery connection test is performed every 20 minutes after operation.
- An error is generated when the battery appears to be missing.

The battery impedance check is measured once every 20 minutes from 30 seconds after AC power is applied to the battery charger. When connecting the battery for the first time, an initial value storage process is required, and an error is generated if the threshold level is exceeded after comparing with the stored value.

2) Low battery voltage protection

Voltage threshold is 19.6VDC $\pm$ 10% for PB-6207B.

- Discharge when there is no AC power to the battery charger
Battery Charger When discharging without AC power, the battery charger discharges the battery to 19.6V. Undervoltage protection is activated. That is, the battery charger turns off and all outputs are shut down.

4. SYSTEM OPERATION

To avoid starting problems with the battery charger, the main output current < 9 A, the auxiliary output current < 9 A, and the total output current < 14 A.

- Please use the following procedure to operate your system.
 - ① Turn on AC power circuit breaker (battery fuse breaker off).
 - ② Check the output voltage of the auxiliary output.
 - Auxiliary output (AUX) : ~ 24.3VDC
 - ③ Turn on the battery fuse breaker. The battery relay is activated in up to approx. 20 minutes.
 - ④ If the 3 LEDs on the front panel are green, the battery charger is working properly.

5. MAINTENANCE

Maintenance must only be carried out by qualified personnel.

6. CAUTION

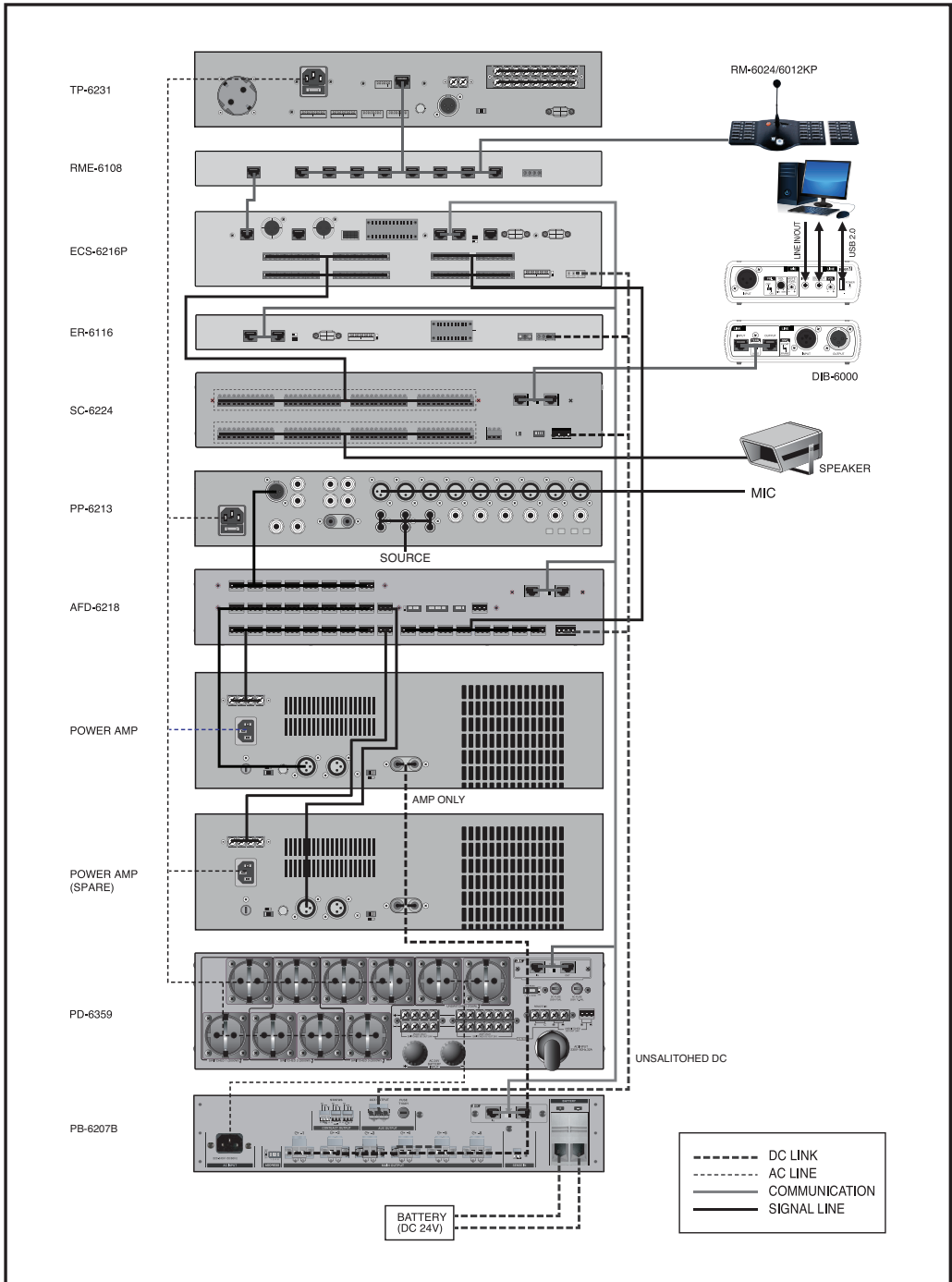
Before removing and opening the battery charger housing, check the following.

- The AC power circuit breaker must be in the off position.
- The battery fuse breaker must be in the off position.
- All connections must be disconnected.
- ① Check the battery periodically. Consult your battery supplier's specifications and guidelines.
- ② Periodically wipe the battery charger with a clean, dry cloth.
- ③ Prevent dust from accumulating on the fan and air intake.

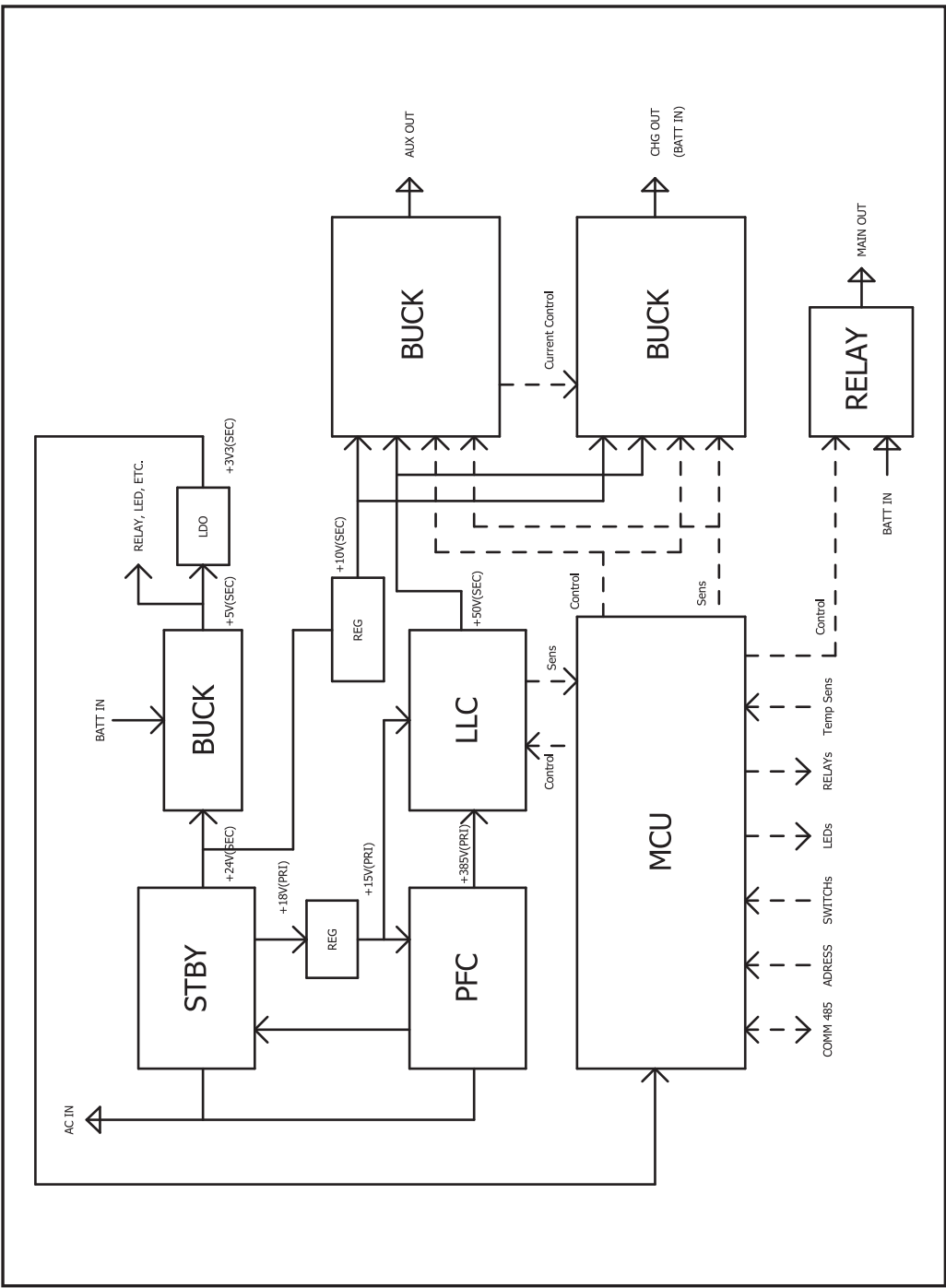
7. WARNING

There is a risk of explosion if the original battery is replaced with an incorrect type of battery. Used batteries must be disposed of according to recycling requirements.

Applications



Block Diagram

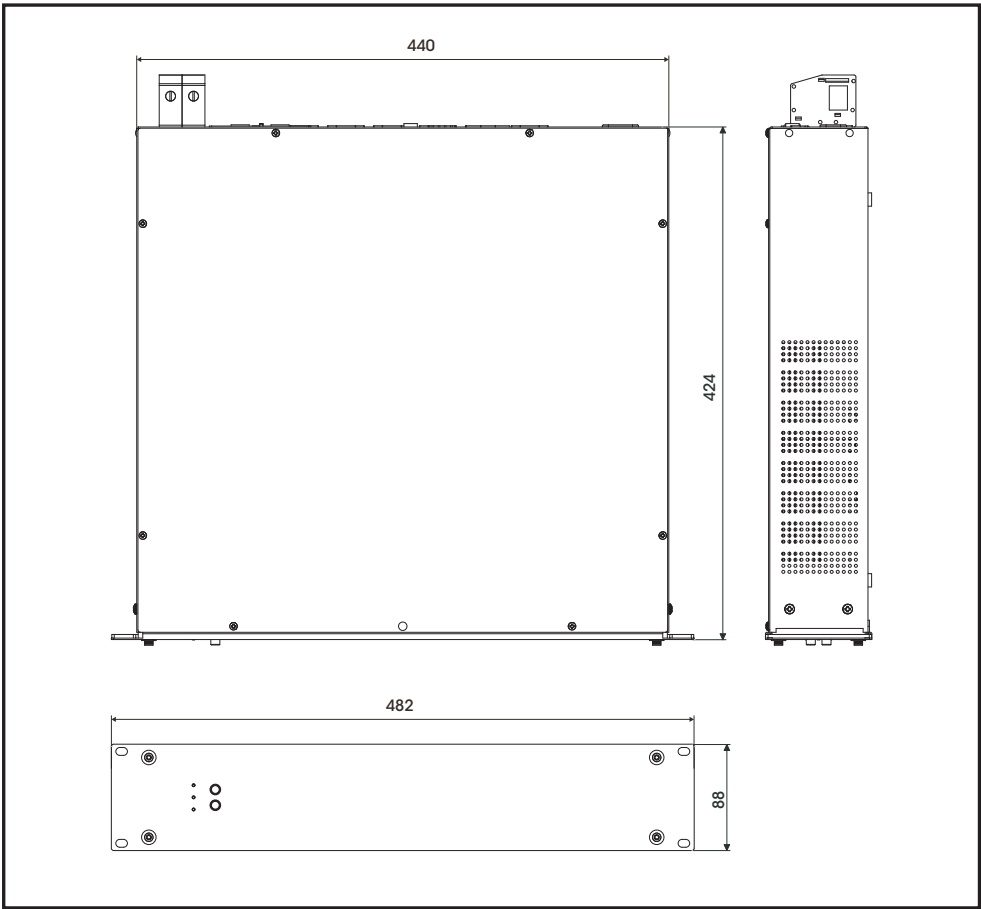


Specifications

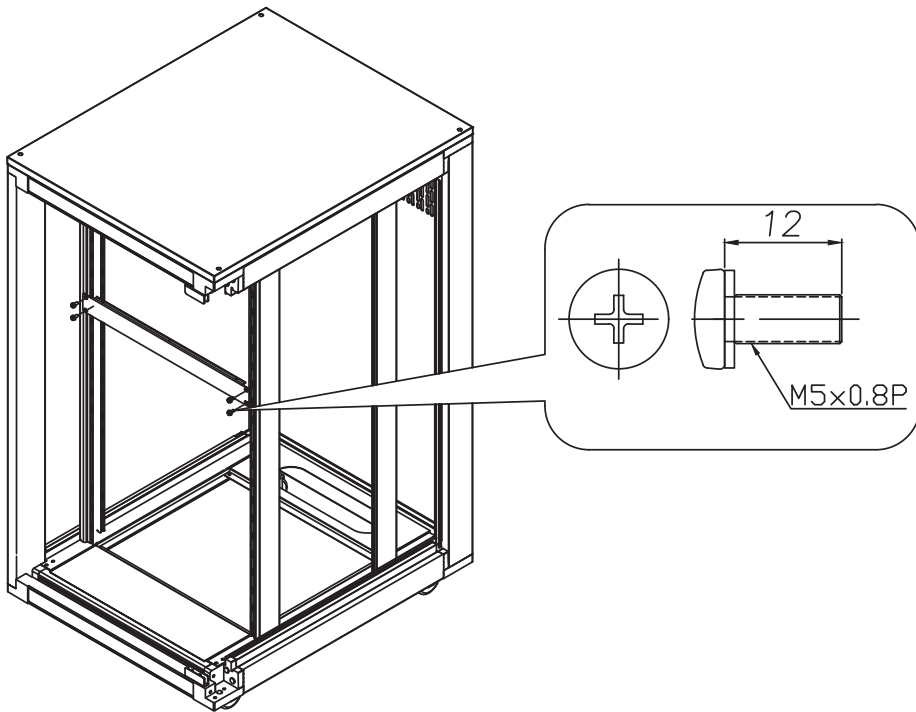
	PB-6207B
Charge Complete Voltage	27.3V@25°C
Starting Current	10A MAX
Auxiliary output voltage	24.3V
Auxiliary output current	10A MAX
Sum of charging and auxiliary output current (auxiliary output priority)	15A MAX
Main output current (per port)	40A MAX
Sum of main output and auxiliary output currents	120A MAX
Operating Temperature	-10°C ~ +40°C
Power Source	AC 220-240V, 50/60Hz
Power Consumption	460W
Weight (Set)	7.9kg/17.4lb
Dimensions (Set)	482(W)×88(H)×424(D)mm 19(W)×3.5(H)×16.7(D)in

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

※ DIMENSIONS



Instructions for use of screws



This product can be used on a table or fixed to a rack.

However, be sure to observe the installation precautions below when using it in a rack.

1. Place the product in an empty area of the rack.
2. Using the included mounting screws, tighten the 4 mounting holes so that there are no voids and fix them.
3. Please proceed with the wiring for the operation of the product, and apply the power last.
4. Disassemble in the reverse order of the above procedure.
5. In case of fixing by not using the included screws or screws of the same size, or using insufficient number of screws the manufacturer is not responsible for any safety accidents caused by this.

Accessories included for fixing the product

- Specification: SCREW M5x0.8P, L=12
- Quantity: 4pcs

Service

Procedures

Take steps to insure the problem is not related to operator error or other products within the system. Information provided in the troubleshooting portion of this manual may help with this process. 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.

Schematic

A Schematic is available by contacting your warranty provider.

Parts List

A Parts List is available by contacting your warranty provider.

Variations and Options

Variations

Products supplied through legitimate 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.



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.

Inter-M Americas, INC.

5666 CORPORATE AVE. CYPRESS, CA 90630

TEL : +1-714-828-2200, FAX : +1-714-828-2210

Home Page : <http://www.inter-m.net>, E-mail : info@inter-m.net

Inter-M Corporation

SEOUL OFFICE : 719, DOBONG-RO, DOBONG-GU, SEOUL, KOREA

TEL : +82-2-2289-8140~8, FAX : +82-2-2289-8149

Home Page : <http://www.inter-m.com>, E-mail : overseas@inter-m.com

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