YAMAHA

SIGNAL PROCESSOR

MMP1

入门

ZH

产品中有害物质的名称及含量

部件名称	有害物质					
	铅（Pb）	汞（Hg）	镉（Cd）	六价铬（Cr(VI)）	多溴联苯（PBB）	多溴二苯醚（PBDE）
外壳、框架	×	○	○	○	○	○
印刷线路板	×	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。
○：表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。
×：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。

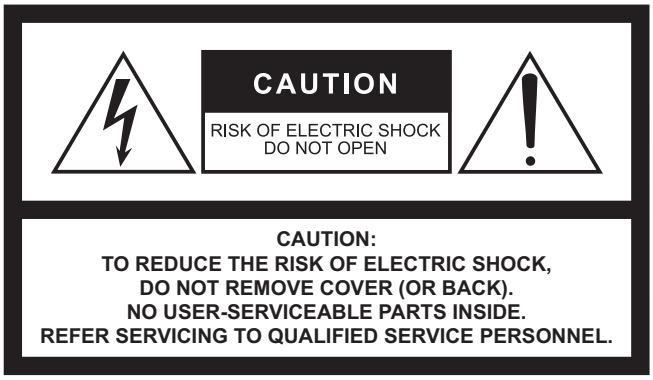
此标识适用于在中华人民共和国销售的电器电子产品。标识中间的数字为环保使用期限的年数。

保护环境
如果需要废弃设备时，请与本地相关机构联系，获取正确的废弃方法。请勿将设备随意丢弃或作为生活垃圾处理。

仅适用于非热带气候条件下安全使用。
ཉེ་ཤུལ་ ཨིལཱ་ ཀ ཨཱཧ ཀྱུལ་ ཤཱསྟྲཱལ་ ཏཱ་ ཉེཏཱཧྲཱ་ ཨཱཏཾ་ ཀྱཾཏཱེཧ ཨཱཀཱཤེ ཏྭ ར་ ཨཱཧཱརྱ.ཀ ཥཿ
ཚ་བའི་ས་ལྷལ་གྱི་གནམ་གཤིས་མེན་པའི་ས་ལྷལ་ཁོ་ནར་ཉེན་མེད་བོད་སྐྱོད་བྱས་འཚག
غەيرى ئىسسىق بەلباغ ھاۋا كىلىماتى شارائىتىدىلا بىخەتەر ئىشلەتكىلى بولىدۇ
Dan hab yungh youq gij dienheiq diuzgen mbouj dwg diegndat haenx ancienz sawjyungh.

仅适用于海拔 2000m 以下地区安全使用。
2000m ར་ ཨཱཧཱརྱ་ ཨཱཡཱཏནཱ་ ཨཱཧ ཉིཏཾ་ ཨཱཧཱརྱ ཏྭ ཀྱཾཏཱེཧ ཨཱཀཱཤེ ཏྭ ར་ ཨཱཧཱརྱ.ཀ ཥཿ
རྒྱ་མཚོའི་ངོས་ལས་མཐོ་ཚད་སྒེ་2000མན་གྱི་ས་ལྷལ་ཁོ་ནར་ཉེན་མེད་བོད་སྐྱོད་བྱས་འཚག
دېڭىز يۈزىدىن 2000 مېتر تۆۋەن رايونلاردىلا بىخەتەر ئىشلەتكىلى بولىدۇ
Dan hab yungh youq gij digih haijbaz 2 000m doxroengz haenx ancienz sawjyungh.

关于产品上所示的图标，请按照相应图标的上述说明进行操作。
ཐིཏཱཧཱརྱ་ ཨཱཧཱ་ ཀཱཡཱཀཱཧཱརྱ་ ཡཱཧཱརྱ.ཀ ཨཱཧཱཏ ཀ ཨཱཧཱརྱ ཨཱཡཱཏནཱ་ ཨཱ ཨཱཧཱརྱ ཡཱཧཱརྱ.ཀ ཨཱཧཱཏ ཨཱ ཨཱཡཱཡཱཏནཱ་ ཀཱཡཱཀཱཡཱཡཱ ཥཿ
ཪོན་ཇལ་སྐྱེང་གི་དའེ་སྟོན་རེས་དབྱིབས་ཀྱི་གསལ་ཤུར་དུ་བེད་སྤྱོད་གཏོང་དགོས།
مەھسۇلات ئۈستىدىكى سىنبەلگىنى ماس چۈشەندۈرۈش بويىچە مەشغۇلات قىلىڭ.
Doiq gijdoz veh youq gwnz canjbinj haenx, cingj mwngz ciuq gijsaw sij youq gwnzdoz doiqndei le menh baezyamq baezyamq ma guh.



The above warning is located on the top of the unit.

L'avertissement ci-dessus est situé sur le dessus de l'unité.

Explanation of Graphical Symbols
Explication des symboles

The lightning flash with arrowhead symbol within an equilateral triangle 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.

L'éclair avec une flèche à l'intérieur d'un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'une « tension dangereuse » non isolée à l'intérieur de l'appareil, pouvant être suffisamment élevée pour constituer un risque d'électrocution.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'instructions importantes sur l'emploi ou la maintenance (réparation) de l'appareil dans la documentation fournie.

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.**

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

(UL60065_03)

PRÉCAUTIONS CONCERNANT LA SÉCURITÉ

1 **Lire ces instructions.**
2 **Conserver ces instructions.**
3 **Tenir compte de tous les avertissements.**
4 **Suivre toutes les instructions.**
5 **Ne pas utiliser ce produit à proximité d'eau.**
6 **Nettoyer uniquement avec un chiffon propre et sec.**
7 **Ne pas bloquer les orifices de ventilation. Installer l'appareil conformément aux instructions du fabricant.**
8 **Ne pas installer l'appareil à proximité d'une source de chaleur comme un radiateur, une bouche de chaleur, un poêle ou tout autre appareil (y compris un amplificateur) produisant de la chaleur.**
9 **Ne pas modifier le système de sécurité de la fiche polarisée ou de la fiche de terre. Une fiche polarisée dispose de deux broches dont une est plus large que l'autre. Une fiche de terre dispose de deux broches et d'une troisième pour le raccordement à la terre. Cette broche plus large ou cette troisième broche est destinée à assurer la sécurité de l'utilisateur. Si la fiche équipant l'appareil n'est pas compatible avec les prises de courant disponibles, faire remplacer les prises par un électricien.**
10 **Acheminer les cordons d'alimentation de sorte qu'ils ne soient pas piétinés ni coincés, en faisant tout spécialement attention aux fiches, prises de courant et au point de sortie de l'appareil.**
11 **Utiliser exclusivement les fixations et accessoires spécifiés par le fabricant.**
12 **Utiliser exclusivement le chariot, le stand, le trépied, le support ou la table recommandés par le fabricant ou vendus avec cet appareil. Si l'appareil est posé sur un chariot, déplacer le chariot avec précaution pour éviter tout risque de chute et de blessure.**

13 **Débrancher l'appareil en cas d'orage ou lorsqu'il doit rester hors service pendant une période prolongée.**
14 **Confier toute réparation à un personnel qualifié. Faire réparer l'appareil s'il a subi tout dommage, par exemple si la fiche ou le cordon d'alimentation est endommagé, si du liquide a coulé ou des objets sont tombés à l'intérieur de l'appareil, si l'appareil a été exposé à la pluie ou à de l'humidité, si l'appareil ne fonctionne pas normalement ou est tombé.**

AVERTISSEMENT
POUR RÉDUIRE LES RISQUES D'INCENDIE OU DE DÉCHARGE ÉLECTRIQUE, N'EXPOSEZ PAS CET APPAREIL À LA PLUIE OU À L'HUMIDITÉ.

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注意事项

请在操作使用前，首先仔细阅读下述内容

请将本说明书存放在安全的地方，以便将来随时参阅。

⚠ *警告*

为了避免因触电、短路、损伤、火灾或其它危险可能导致的严重受伤甚至死亡，请务必遵守下列基本注意事项。这些注意事项包括但不限于下列情况：

电源 / 电源线

- 请勿将电源线放在热源如加热器或散热器附近，不要过分弯折或损伤电源线，不要在其上加压重物，不要将其放在可能被踩踏引起绊倒或可能被碾压的地方。
- 只能使用本设备所规定的额定电压。所要求的电压被印在本设备的铭牌上。
- 只能使用附带的电源线 / 插头。
  如果您需要在购买时所在地区之外的其它地区使用本设备，附带的电源线可能不兼容。请咨询 Yamaha 经销商。
- 定期检查电插头，擦除插头上积起来的脏物或灰尘。
- 设置设备时，请务必选择便于插拔的 AC 电源插座。如果出现问题或故障，请立即关闭电源开关，并将插头从电源插座中拔出，还要从 [BACKUP DC INPUT] 接口断开已连接的电源。即使电源开关已经关闭，只要未从壁式 AC 电源插座拔出电源线，本设备就不会真正断开电源。
- 长时间不使用设备时，或者在雷电风暴期间，请从电源插座中拔出电源插头。
- 请务必连接到带有保护接地连接的适当电源插座。

请勿打开

- 本设备不含任何用户可自行修理的零件。请勿打开本设备或试图拆卸其内部零件或进行任何方式的改造。若出现异常，请立即停止使用，并请有资质的 Yamaha 维修人员进行检修。

关于潮湿的警告

- 请勿让本设备淋雨或在水附近及潮湿环境中使用，或将盛有液体的容器 （如花瓶、瓶子或玻璃杯）放在其上，否则可能会导致液体溅入任何开口。如果水等任何液体渗入设备，请立即切断电源并从 AC 电源插座拔下电源线，还要从 [BACKUP DC INPUT] 接口断开已连接的电源。然后请有资质的 Yamaha 维修人员对设备进行检修。
- 切勿用湿手插拔电源线插头。

听力损伤

- 将本设备连接到其它设备之前，请关闭所有设备的电源开关。否则可能会导致听力损伤，触电或设备损坏。
- 打开音频系统的电源时，请始终最后打开功率放大器，以避免损伤听力或损坏音箱。同样，关闭电源时，请首先关闭功率放大器。

火警

- 请勿在设备附近放置燃烧物品或使设备靠近明火，否则可能引起火灾。

当意识到任何异常情况时

- 如果发生下列任何问题，请立即关闭电源开关并从电源插座中拔出电源线插头，还要从 [BACKUP DC INPUT] 接口断开已连接的电源。
  - 电源线或插头出现磨损或损坏。
  - 排放异常气味或烟雾。
  - 某些物体掉入设备中。
  - 使用设备过程中声音突然中断。
  - 设备上出现裂纹或其他损坏现象。

  后请有资质的 Yamaha 维修人员对设备进行检修。
- 如果本设备电源跌落或损坏，请立即关闭电源开关，从电源插座中拔出电源线插头，还要从 [BACKUP DC INPUT] 接口断开已连接的电源，然后请有资质的 Yamaha 维修人员对设备进行检修。

⚠ 注意

为了避免您或周围他人可能发生的人身伤害、设备或财产损失，请务必遵守下列基本注意事项。这些注意事项包括但不限于下列情况：

电源 / 电源线

- 当从设备或电源插座中拔出电源线插头时，请务必抓住插头而不是电源线。直接拽拉电源线可能会导致其损坏。
- 要从主机上断开设备，请将两条电源线都拔除。

安放位置

- 请勿将本设备放在不稳定的地方，否则可能会导致突然翻倒并造成人身伤害。
- 请勿挡住通风口。本设备在侧面都有通风孔，用以防止设备内部温度过高。尤其要注意，不要侧面朝下或上下颠倒放置本设备。通风不畅可能导致过热，并可能损坏设备，甚至引起火灾。
- 请勿将本设备放置在可能会接触到腐蚀性气体或含有盐份的空气。否则可能会导致故障。
- 搬动设备之前，请务必拔出所有已连接的连接线。
- 如果将设备安装在 EIA 标准机架上，请仔细阅读第 13 页上的 " 机架安装的注意事项 " 章节。通风不畅可能导致过热，并可能损坏设备、造成故障，甚至引起火灾。

保养维护

- 在对本设备进行清洁时，请务必将电源插头从 AC 电源插座中拔出，并从 [BACKUP DC INPUT] 接口断开已连接的电源。

小心操作

- 请避免在设备上的任何间隙或开口插入或落进异物（纸张、塑料、金属等）。如果发生这种情况，应立即切断电源，从 AC 电源插座上拔下电源线，并请有资质的 Yamaha 维修人员对设备进行检修。
- 请勿将身体压在本设备上或在其上放置重物。操作按钮、开关或插口时要避免过分用力，防止受伤。
- 避免牵拉连接电缆以防止受伤或损坏设备。

备份电池

- 不要自行更换备份电池。否则会造成爆炸和 / 或设备的损坏。当需要更换备份电池时， MMP1 连接到 MMP1 Editor 的情况下， " 错误图标 " 会出现在 MMP1 Editor 的菜单栏。这种情况下，请联系您的 Yamaha 经销商和有资质的 Yamaha 售后服务人员，更换备份电池。

对由于不正当使用或擅自改造本设备所造成的损失、数据丢失或破坏， Yamaha 不负任何责任。

须知

为避免本产品、数据或其它部件可能受到的损坏，请注意下列事项。

操作和维护

- 请勿在电视、收音机、 AV 设备、手机或其他电子设备附近使用本设备。这可能会在设备本身以及靠近设备的电视机或收音机中引起噪音。
- 为了避免操作面板发生变形、不稳定操作或损坏内部元件，请勿将本设备放在有大量灰尘、震动、极端寒冷或炎热 （如阳光直射、靠近加热器或烈日下的汽车里）的环境中。
- 请勿在乐器上放乙烯或塑料或橡胶物体，否则可能使面板脱色。
- 清洁设备时，使用柔软的干布。请勿使用涂料稀释剂、溶剂、清洁液或浸了化学物质的抹布。
- 设备中可能会由于环境温度的快速变化而发生冷凝 — 例如，当设备从一个地方移动到另一个地方时，或者当打开或关闭空调时。发生冷凝时使用本设备会造成损坏。如果有理由相信可能发生了冷凝，请将本设备放置几个小时而不打开电源直到冷凝彻底消失。
- 当在光滑表面上使用设备时，可以把此包装中附带的橡胶腿附接在扬声器上以防止滑移。
- 当不使用本设备时，请务必关闭其电源。
- 即使当 （⏻） [MAIN] 开关和 （⏻） [BACKUP] 开关都处于待机状态 （电源指示灯熄灭），仍会有微量的电流通向本乐器。预计长时间不使用本乐器时，请务必从壁式 AC 电源插座上拔下电源线，还要从 [BACKUP DC INPUT] 插孔断开已连接的电源。

保存数据

本设备带有内部备份电池，用以在电源关闭时保存内部存储器的数据。但是当备份电池的电量耗尽时，内部存储器的内容将丢失。为了防止数据的丢失，请在备份电池完全耗尽之前进行更换。当备份电池的容量过低需要更换时， MMP1 连接到 MMP1 Editor 的情况下，错误图标会出现在 MMP1 Editor 器的菜单栏。如果出现这些信息中的任何一个，不要关闭电源并立即将要保存的数据传输到计算机或其他外部存储设备，然后请有资质的 Yamaha 售后服务人员更换备份电池。内部备份电池的平均寿命约为 5 年，电池寿命根据操作情况的不同有所差异。

本产品的型号、序列号、电源要求等规格可能标在铭牌上或铭牌附近，铭牌位于本机顶部。请将该序列号填写到下方的横线上，并妥善保存本说明书，以便在产品被盗时作为永久购买凭证使用。

型号名称

序列号

(top_zh_01)

信息

有关本产品中捆绑功能 / 数据

- 本产品使用 Dante Brooklyn II。
  有关特定软件的开源许可的详细信息，请参见 Audinate 网站（英文）。
  https://www.audinate.com/software-licensing

关于本说明书

- 本书中出现的插图和画面仅供说明用途。
- Yamaha 公司对软件和文档的使用不作任何陈述或保证，对本说明书和软件的使用结果不承担任何责任。
- Windows 是 Microsoft® Corporation 在美国及其它国家的注册商标。
- Mac 和 iPad 是 Apple Inc. 在美国和其它国家的注册商标。
- 本使用说明书中所使用的公司名和产品名都是各自公司的商标或注册商标。
- 软件如有修改和更新，恕不另行通知。
- 为便于您理解使用说明书的内容，本公司已经依据国家的相关标准尽可能的将其中的英文表述部分翻译成中文。但是，由于专业性、通用性及特殊性，仍有部分内容仅以原文形式予以记载。如您有任何问题，烦请随时与本公司客服联系 （热线：400-051-7700）。

1. 感谢惠购

感谢您购买Yamaha signal processor MMP1。为了最大限度地发挥MMP1的功能，延长正常使用寿命，请务必阅读本说明书。阅读本说明书后，请妥善保管以备将来参阅。

1-1. 目标用户

本产品专为具有与后期制作、录音或广播相关的基本知识和技能的用户而设计。

1-2. 目标用途

- 本产品旨在用于改善DAW录音室录制期间的监控和通信环境。
- 本产品设计用于混合多个音频源并在广播中路由音频信号。

1-3. 包含附件

- 入门 （本书）
- 电源线
- 橡胶垫 （×4）

1-4. 文档

MMP1有以下两个单独说明书。

入门（本书）

本说明书主要说明如安装和连接等设置本产品时的操作。

使用说明书 （PDF；可下载）

本说明书介绍与专用程序配合使用本产品时的操作。可以从下列Yamaha Pro Audio网址下载使用说明书：
http://www.yamahaproaudio.com/

注

使用说明书是PDF格式的电子说明书。可以从下列网址下载阅读PDF文件所需的Adobe Acrobat Reader DC：
https://www.adobe.com/

1-5. 本书中使用的命名方式

为了区分MMP1设备上的控制器和屏幕上的控制器，以下列方式写入控制器名称：

- 设备上的实际按钮称为**按键**，屏幕上的虚拟按钮称为**按钮**。
- 位于设备的按键、开关、指示灯和插孔等均以**[方括号]**包裹。对于某些控制器，其所属部分的名称显示在[]之前 （例如， SCENE [1]键）。
- 显示于屏幕的菜单、按钮、标签和窗口等均以**“引号”**包裹。（例如， “MUTE”按钮）

1-6. 应用程序

要操作MMP1，请使用以下应用程序：

- **MMP1 Editor （Windows、 Mac）**
  该程序允许您控制MMP1的所有功能。

- **MMP1 Controller （iPad）**
  该程序备有有限的一组可控功能更容易操作MMP1。
  使用MMP1 Controller之前，您将需要对使用MMP1 Editor的MMP1进行初始化设置。

有关这些程序的详情，请参见从Yamaha Pro Audio网址下载的MMP1使用说明书：
http://www.yamahaproaudio.com/

1-7. 固件升级

可以升级固件，以利提高操作性、增加功能并排除可能的故障。
有关固件升级的详情，请参见Yamaha Pro Audio website网址：
http://www.yamahaproaudio.com/

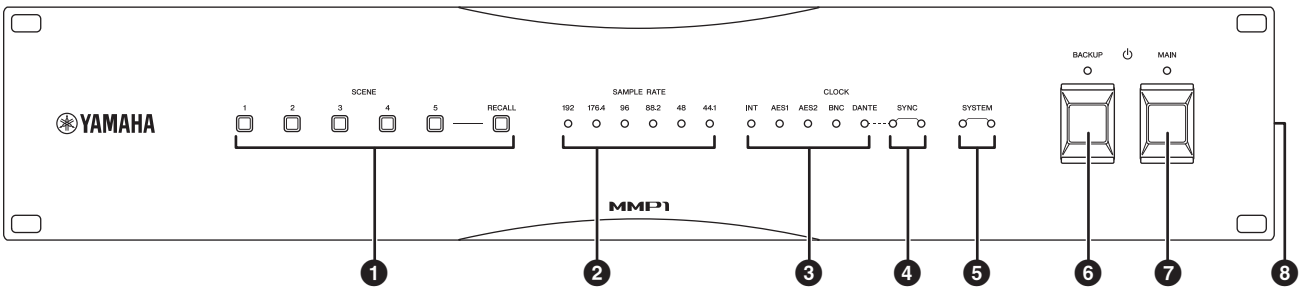
有关升级固件的信息，请参见官方网站提供的固件升级指南。

注

为了保持Dante兼容设备之间的兼容性，可能需要更新多个Dante兼容设备。有关详情，请参见Yamaha Pro Audio网址上的固件兼容信息：
http://www.yamahaproaudio.com/

2. 名称和功能

2-1. 前面板



❶ SCENE [1] – [5]、 [RECALL]键

用于调用先前存储在设备中的场景。当按下[1] – [5]键的任一一个时，该按键闪烁约10秒。（如果未存储与按键对应的场景，按键不闪烁。）当[1] – [5]键的任一一个闪烁的同时按下[RECALL]键，调出场景且按键持续点亮。使用MMP1 Editor存储场景。

注

您可以将[1]键设为全部静音键。有关详情，请参见MMP1使用说明书。

❷ SAMPLE RATE指示灯

表示设备正在使用的当前采样率。与字时钟源同步的指示灯亮起。如果设备无法与字时钟源同步，其中一个指示灯缓慢闪烁。

❸ CLOCK指示灯

表示一个字时钟源。当字时钟源未连接到设备或字时钟源有任何问题时，其中一个指示灯缓慢闪烁。

❹ SYNC指示灯

表示Dante网络和设备之间的同步状态。

绿色 （常亮）	设备在Dante网络中以时钟从机身份工作。
绿色 （缓慢闪烁）	设备在Dante网络中以时钟主机身份工作。
绿色 （熄灭） 橙色 （常亮）	Dante网络正在同步。
橙色 （缓慢闪烁）	与冗余网络的辅助线路通信。
橙色 （闪烁2次）	冗余网络的辅助线路发生错误。

❺ SYSTEM指示灯

表示设备的运行状态。

绿色 （常亮） 红色 （熄灭）	本设备工作正常。
绿色 （缓慢闪烁）	固件正在更新。
红色 （常亮）	设备的存储器发生错误。如果按照page 15上的“恢复出厂设置”说明仍未解决问题时，请咨询Yamaha经销商。
红色 （缓慢闪烁）	设备的Dante模块发生错误。
红色 （快速闪烁）	备份电池的电量减低。请联系Yamaha经销商和有资质的Yamaha售后服务人员，更换备份电池。

❻ ⏻[BACKUP]电源开关和指示灯

将设备的DC(直流)电源置于 （▂）或设为待机 （▀）。打开本设备DC电源时，指示灯亮起。

须知

即使电源开关处于待机位置 （▀），设备电路中仍存在少量电流。当长时间不使用本设备时，请务必从[BACKUP DC INPUT]接口断开电源。

注

将设备快速交替设定为打开和待机，会造成设备的损坏。将设备设定为待机后，等待至少6秒后才能再次打开。

❼ ⏻[MAIN]电源开关和指示灯

将设备的AC(交流)电源置于 （▂）或设为待机 （▀）。打开本设备AC电源时，指示灯亮起。
当⏻ [MAIN]电源开关和⏻ [BACKUP]电源开关都至于（▂）时，仅向本设备供应AC电源。

须知

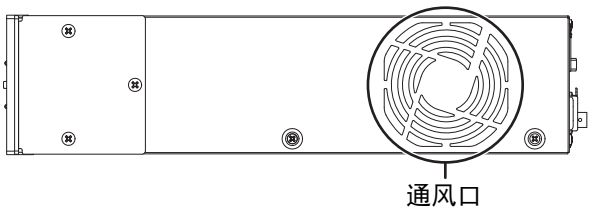
即使电源开关处于待机位置 （▀），设备电路中仍存在少量电流。确定长时间不使用本设备时，请务必将电源插头从AC电源插座中拔出。

注

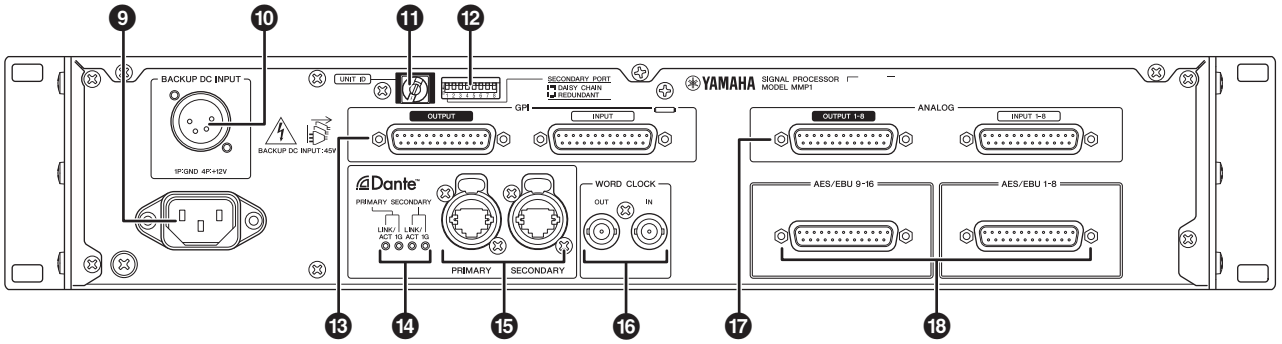
将设备快速交替设定为打开和待机，会造成设备的损坏。将设备设定为待机后，等待至少6秒后才能再次打开。

❽ 通风口

本设备配备有散热风扇。排气口可以让热空气从本机中排除。切勿用任何物品阻塞排气口。



2-2. 后面板

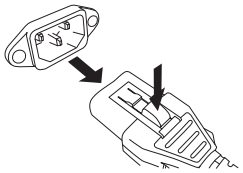


❾ AC(交流)电源输入插座

用于连接AC电源线。先将AC电源线连接到本设备，然后将电源线插头插入适当的AC电源插座。
务必将电源线插头完全插入到底，直到牢固锁紧。附带的AC电源线带有可锁紧的V-lock装置，可以防止电源线的意外脱落。

注意

连接或断开电源线之前，请确保将本设备电源置于待机。要断开电源线，请在移除插头时按住插头上的锁紧装置。



❿ [BACKUP DC INPUT]接口

用于连接外部DC(直流)电源单元 （+12V、 40W）以备份AC(交流)电源。接口类型为XLR-4-32。请参见“技术规格”的针脚分配。

即使⏻ [BACKUP]电源开关处于待机位置，待机电流仍放电。因此， Yamaha不保证电池的使用。

注意

连接或断开外接电源之前，必须将本设备的电源和外接供电设备的电源置于待机。如不遵守本警告，可能发生故障或触电事故。

⓫ [UNIT ID]旋转开关

决定一个供您在Dante网络中识别该设备的ID。如果有多台需要ID设置的Yamaha Dante兼容设备已连接在同一网络中，需要为每台设备设置不同的ID。

注

接通电源的ID设置会在下一次开机后应用。

⓬ DIP开关

用以更改设备上的设置。请参见page 12上的“连接之前”和page 15上的“恢复出厂设置”。

注

接通电源的设置会在下一次开机后应用。

⓭ GPI [INPUT]/[OUTPUT]接口

用于连接GPI接口设备。接口类型为D-sub 25针凹入式。使用MMP1 Editor以详细了解本设备的GPI设置。请参见“技术规格”以了解每针的电流和电压以及针脚分配。

⓮ Dante [LINK/ACT]/[1G]指示灯

显示Dante [PRIMARY]和[SECONDARY]接口的通信状态。

LINK/ACT	如果以太网线连接正确，它们会快速闪烁。
1G	当Dante网络以Giga-bit网络形式工作时，这些指示灯会亮起。

⓯ Dante [PRIMARY]/[SECONDARY]接口

用于连接Dante网络。接口类型为etherCON （RJ-45）。每个接口可传送的音频多达64个通道 （输入/输出）。

注

- 请使用CAT5e标准STP （屏蔽双绞线）或更高规格电缆，以防电磁干扰。确保插头的金属部分和STP屏蔽线之间使用导电胶带或类似方式可靠连接，导电性能良好。
- 仅用于连接Dante兼容设备或GbE兼容设备 （包括计算机）。

⓰ WORD CLOCK [IN]/[OUT]接口

用于连接设备以接收或传送字时钟信号。接口类型为BNC。 WORD CLOCK [IN]接口在内部以75欧姆电阻终结。

⓱ ANALOG [INPUT 1-8]/[OUTPUT 1-8]接口

用于连接设备以传送或接收模拟量音频信号。接口类型为D-sub 25针 （平衡）。每个接口可传送的音频多达8个通道 （输入/输出）。

⓲ [AES/EBU 1-8]/[AES/EBU 9-16]接口

用于连接设备以传送或接收AES/EBU格式数字音频信号。接口类型为D-sub 25针。每个接口可传送的音频多达8个通道 （输入/输出）。

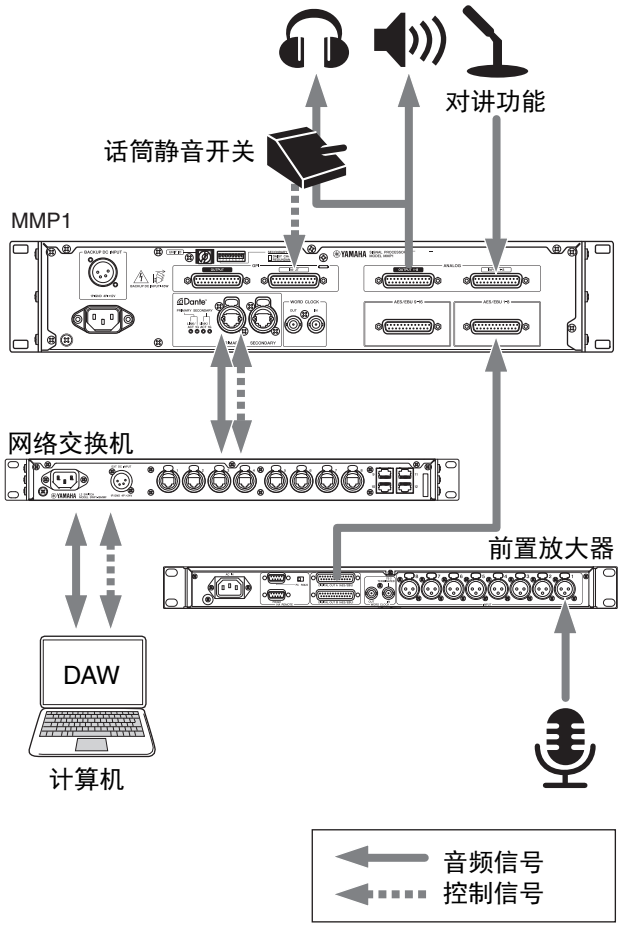
注

使用屏蔽电缆可防电磁干扰。

确保插头的金属部分和屏蔽电缆之间使用导电胶带或类似方式可靠连接，导电性能良好。

3. 位置和连接

3-1. 连接示例



3-2. 连接之前

事先进行本设备的各种设置。

3-2-1.UNIT ID

3-2-2.如何连接到Dante网络

3-2-3.IP地址

接通电源的任何设置会被保存直到下一次开机后应用。

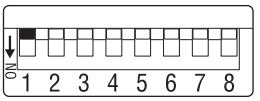
3-2-1. UNIT ID

决定一个在Dante网络中识别各设备的ID。对于此设置，请使用本设备后面板上的旋转开关。 UNIT ID必须是网络中的唯一编号。

3-2-2. 如何连接到Dante网络

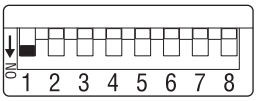
本设备可通过以下两种方式之一连接到Dante网络：星型 （冗余）和菊型链。对于此设置，请使用本设备后面板上的DIP开关1。

REDUNDANT



DIP开关1**向上** （默认）。

DAISY CHAIN

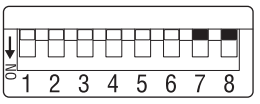


DIP开关1**向下**。

3-2-3. IP地址

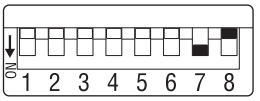
决定从计算机识别本设备的IP地址。对于此设置，请使用本设备后面板上的DIP开7和8。

Auto IP



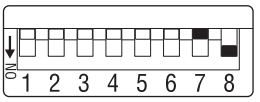
DIP开关7和8**向上**。
自动在169.254.0.1至169.254.254.254（默认值）的范围内设置IP地址。

DHCP



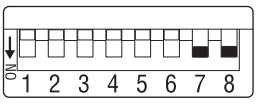
DIP开关7**向下**和8**向上**。
由DHPC服务器分配的IP地址。

Static IP (Auto)



DIP开关7**向上**和8**向下**。
IP地址设为192.168.0.xx （xx=UNIT ID）。

Static IP (Manual)



DIP开关7和8**向下**。
使用MMP1 Editor设置IP地址。

3-3. 机架安装的注意事项

本设备额定在0到40˚C环境温度的范围内操作。如果在一台EIA标准设备机架上与其它MMP1设备一起安装本设备，机架中的温度升高，可能造成设备性能无法正常发挥。
在机柜中安装本设备时，请始终按照下列要求操作，避免热积聚：

- 将本设备与某些设备一起，如可产生大量热量的功率放大器在机架中安装时，请在MMP1和其它设备之间保留1U以上的空间距离。另外，请将开口部位保持开放或者安装适当的通风面板，以减少热量积蓄的可能性。
- 为了确保足够的空气流通，请将机架背面敞开并将其放置在离开墙壁或其它表面10cm以上的位置。

如果无法将机架的背面敞开，请安装市售的风扇或类似通风设备来确保足够的空气流通。如果已安装了风扇组件，将机架后部封闭可能会达到更好的冷却效果。
有关详情，请参见机架和/或风扇组件的使用说明书。

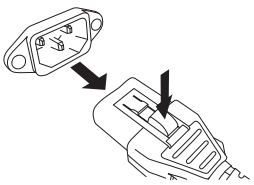
3-4. 电源

3-4-1. 连接AC(交流)电源线

1. **确保⏻ [MAIN]电源开关和⏻ [BACKUP]电源开关处于待机位置 （■）。**
2. **连接电源线至本设备的AC电源输入插座。**
3. **将电源线的另一端连接至AC电源插座。**

注

- 要断开电源线，请按照上述介绍中1 → 3 → 2的顺序拔除线缆。
- 要断开电源线，请按住插头上的卡锁装置，同时拔出电源线。



警告
仅限使用附带的AC电源线。使用其它线缆可能造成过热或短路。

注意
连接或断开电源线之前，请确保将本设备电源置于待机。

须知
即使电源开关处于待机位置 （■），设备电路中仍存在少量电流。如果长时间不使用电源装置，确保从AC电源插座中拔出电源线。

3-4-2. 打开电源并置于待机

打开本设备电源时，确保最后打开功放和/或有源音箱的电源，以防损坏音箱。将本设备电源置于待机之前，要先关闭功放和/或有源音箱的电源。

3-5. 关于Dante

Dante是由Audinate公司开发的一种网络音频协议。它设计为以多种采样率和比特率传输多通道音频信号，同时通过Giga-bit Ethernet （GbE）网络传输设备控制信号。

请访问Audinate官方网站获取更多详细信息。
https://www.audinate.com/

更多Dante的相关信息也发布在Yamaha Pro Audio网站上：
http://www.yamahaproaudio.com/

3-6. 使用网络交换机的相关注意事项

在Dante网络中不要使用网络交换机的EEE功能 （*）。支持EEE功能的交换机，尽管可以自动调节两两之间的功耗设置，但仍有无法正确调节此类设置的交换机。设置不当时，在Dante网络中启用EEE功能，可能会导致不同步和断线。
因此我们建议如下。

- 如果使用可管理交换机，请禁用EEE功能。不要使用无法禁用EEE功能的交换机。
- 使用不可管理的交换机时，不要使用支持EEE功能交换机。此类交换机的EEE功能无法禁用。

* EEE （能效以太网）是一种能在低网络流量期间，降低交换机功耗的技术。也被称为绿色以太网和IEEE802.3az。

3-7. Dante的网络设置和音频路由

使用Dante网络，就能够以任意方式路由多台Dante设备的输入和输出信号。需要设定哪个通道的信号被发送到哪个输入口。
使用Dante Controller软件配置Dante网络的音频路由。

可从下列网站下载Dante Controller。
http://www.yamahaproaudio.com/

有关Dante Controller的详情，请参见Dante Controller软件的使用说明书 （可从相同网址下载）。

4. 安装程序

4-1. MMP1 Editor

MMP1 Editor是用于操作MMP1的应用程序。兼容Windows和Mac。

1. 使用管理权限登录到计算机以安装MMP1 Editor。

2. 从Yamaha Pro Audio网址下载MMP1 Editor（安装程序）：
http://www.yamahaproaudio.com/

3. 解压缩已下载的文件。

4. 在已解压缩的文件夹内双击安装程序开始安装。
安装程序名称为“setup.exe”（用于Windows）、“Yamaha MMP1 Editor Vx.x.x.pkg”（用于Mac）。字母“x.x.x”表示MMP1的版本。

5. 按照屏幕上的说明进行操作。

注

- Windows环境下，当出现“用户帐户控制”窗口时，单击[继续]或[是]。
- 要卸载MMP1 Editor

Windows：在控制面板中，单击[程序和功能]或[卸载程序]，然后选择MMP1 Editor并单击[卸载或更改程序]。
Mac：双击“Uninstall Yamaha MMP1 Editor.app”然后按照屏幕上的指示操作。

4-2. MMP1 Controller

MMP1 Controller是用于iPad操作MMP1的应用程序。本程序旨在通过限制可编程控制功能相较MMP1 Editor更直观地操作MMP1。

1. 在App Store中检索“MMP1 Controller”。

2. 轻击“MMP1 Controller”以显示详情。

3. 轻击“免费”按钮。

4. 轻击“安装”按钮。

5. 按照屏幕上的说明进行操作。

5. 故障排除

除了参考此常见问题/解决方案列表外，请访问Yamaha Pro Audio网址的FAQ列表 （常见问题）。
http://www.yamahaproaudio.com/

5-1. 无法从计算机或iPad找到MMP1

- 在同一个Dante网络中工作时，务必设置唯一的UNIT ID。
- 确保网络交换机正常工作。重启网络可能解决问题。
- 确保电缆未损坏。更换电缆可能解决问题。
- 确保计算机的IP地址和本设备的IP地址设置正确。

5-2. 无声音

当设备连接到Dante网络时，请确保Dante网络中的跳线已使用Dante Controller正确设置。
有关详情，请参见下列网址中的Dante Controller用户指南。
http://www.yamahaproaudio.com/

5-3. 如何升级固件

有关固件升级的详情，请参见Yamaha Pro Audio网址：
http://www.yamahaproaudio.com/

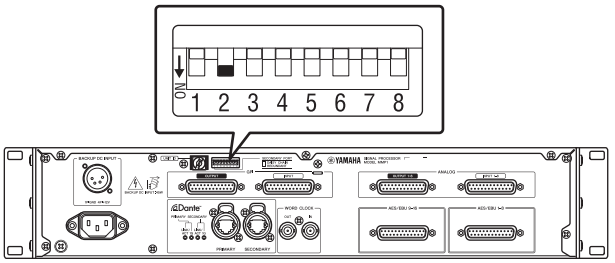
5-4. 诸如“firmware mismatch”（固件不匹配）等内部出错信息会出现在已连接至MMP1的设备

确保每个设备都是可兼容的版本。
有关详情，请参见网站上的固件兼容信息。
http://www.yamahaproaudio.com/

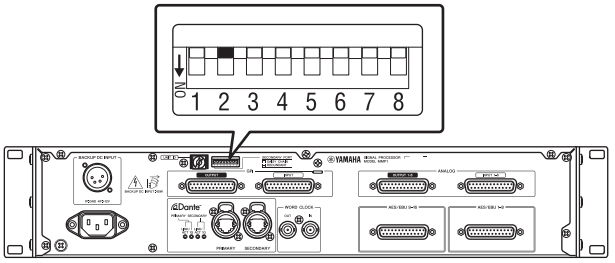
5-5. 恢复出厂设置

下列步骤可以将本设备的内部存储器初始化为出厂默认设置。

1. **本设备至于待机。**
2. **打开DIP开关2 （向下），然后再次打开本设备。**
   前面板上的所有指示灯 （除了电源指示灯）开始闪烁，表示所有参数已经被恢复为出厂设置。



3. **本设备至于待机。**
4. **关闭DIP开关2 （向上），然后再次打开本设备。**



6. 技术规格

6-1. 电气特性

采样率	内部	44.1kHz/48kHz/88.2kHz/96kHz/176.4kHz/192kHz
	外部	44.1kHz/48kHz/88.2kHz/96kHz/176.4kHz/192kHz, ±200ppm
模拟输入/输出	频率响应	-1/0.5dB, 20Hz – 20kHz
	THD+N	0.0036%, +4dB@20Hz – 20kHz, GAIN：0dB, Fs=192kHz
	动态范围	110dB, A加权
	串扰@1kHz	-100dB

6-2. 模拟输入特性

输入端口	实际负载阻抗	额定值下使用	输入电平		接口	平衡/非平衡
			标称	失真前最大		
ANALOG INPUT 1 – 8	20kΩ	150Ω 线路	+4dB（1.23V）	+24dBu（12.28V）	D-SUB接口 25P（内接口）	平衡
	10kΩ	600Ω 线路	-10dBV（0.32V）	+10dBV（3.16V）		非平衡

6-3. 模拟输出特性

输出端口	实际声源阻抗	额定值下使用	输出电平		接口	平衡/非平衡
			标称	失真前最大		
ANALOG OUTPUT 1 – 8	75Ω(BAL)	10kΩ 线路	+4dBu（1.23V）	+24dBu（12.28V）	D-SUB接口 25P（内接口）	平衡
			-2dBu（0.62V）	+18dBu（6.16V）		

6-4. 数字输入特性

端口	格式	数据长度	电平	接口	平衡/非平衡
AES/EBU 1 – 16	AES/EBU	24bit	RS422	D-SUB接口 25P（内接口）	平衡

6-5. 数字输出特性

端口	格式	数据长度	电平	接口	平衡/非平衡
AES/EBU 1 – 16	AES/EBU	24bit	RS422	D-SUB接口 25P（内接口）	平衡

6-6. 数字输入和输出特性

端口	格式	数据长度	电平	音频	接口
主/次	Dante	24bit	1000Base-T	64ch Input 64ch Output	etherCON x 2

6-7. 控制I/O特性

端口		格式	电平	接口	平衡/非平衡
GPI	IN	—	—	D-SUB接口 25P（内接口）	—
	OUT	—	—		
WORD CLOCK	IN	—	TTL/75Ω 终止	BNC	—
	OUT	—	TTL/75Ω		

- GPI输入 ch1 – 12：光电耦合器、额定输入电压=30V、负载电流=3mA （典型值）参见图1。
- GPI输入 ch13 – 16：光电耦合器、 IN+输入电压范围=5V至24V、 IN+额定输入电压=30V、负载电流=2mA @5V或10mA @24V （典型值）参见图2。
- GPI输出 ch1 – 10：集电极开路、最大漏电流=75mA （每个通道）、耐电压=12V
- GPI功率输出：输出电压=5V +/- 0.25V、最大源电流=300mA

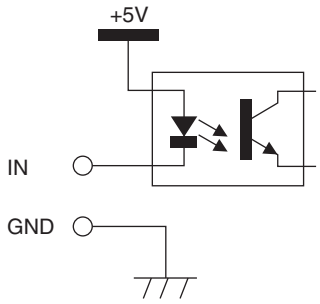


图 1: GPI 输入 ch1-12

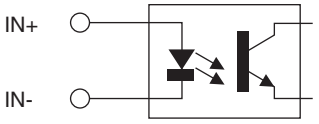


图 2: GPI 输入 ch13-16

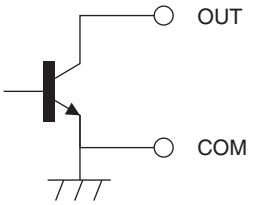


图 3: GPI 输出

6-8.外部DC输入特性

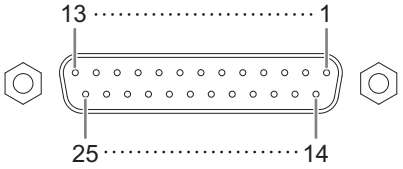
端口	接口
BACKUP DC INPUT	XLR-4-32型

6-9.一般技术规格

电源要求（瓦）	45W
MAIN AC INPUT的电源要求（伏和赫兹）	110 – 240V 50/60Hz
BACKUP DC INPUT的电源要求	12V-14.8V、 4A
温度范围	运行温度范围：0 – 40°C 保存温度范围：-20 – 60°C
尺寸 （宽x高x深）	480 x 88 x 368mm
净重	7.0kg
包含附件	电源线、铁氧体磁芯、 MMP1入门、橡胶垫 （4）

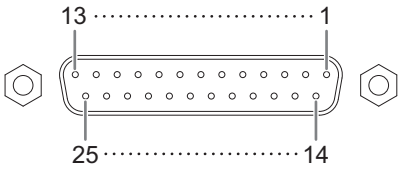
6-10.针脚分配

ANALOG [INPUT]接口



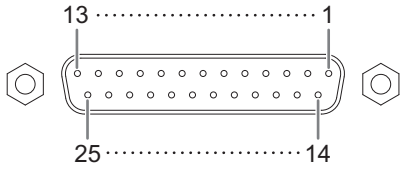
信号		输入通道								打开	GND
		1	2	3	4	5	6	7	8		
针脚	热	24	10	21	7	18	4	15	1	13	2, 5, 8, 11, 16, 19, 22, 25
	冷	12	23	9	20	6	17	3	14		

ANALOG [OUTPUT]接口



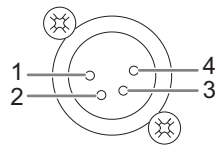
信号		输出通道								打开	GND
		1	2	3	4	5	6	7	8		
针脚	热	24	10	21	7	18	4	15	1	13	2, 5, 8, 11, 16, 19, 22, 25
	冷	12	23	9	20	6	17	3	14		

[AES/EBU]接口



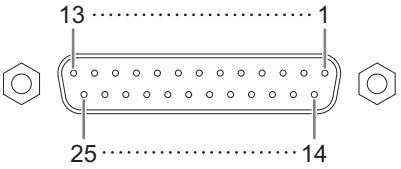
信号		数据输入通道				数据输出通道				打开	GND
		1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8		
		9-10	11-12	13-14	15-16	9-10	11-12	13-14	15-16		
针脚	热	1	2	3	4	5	6	7	8	9, 11	10, 12, 13, 22, 23, 24, 25
	冷	14	15	16	17	18	19	20	21		

[BACKUP DC INPUT]接口



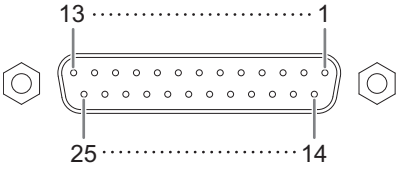
信号	打开	GND	+12V
针脚	2, 3	1	4

GPI [INPUT]接口



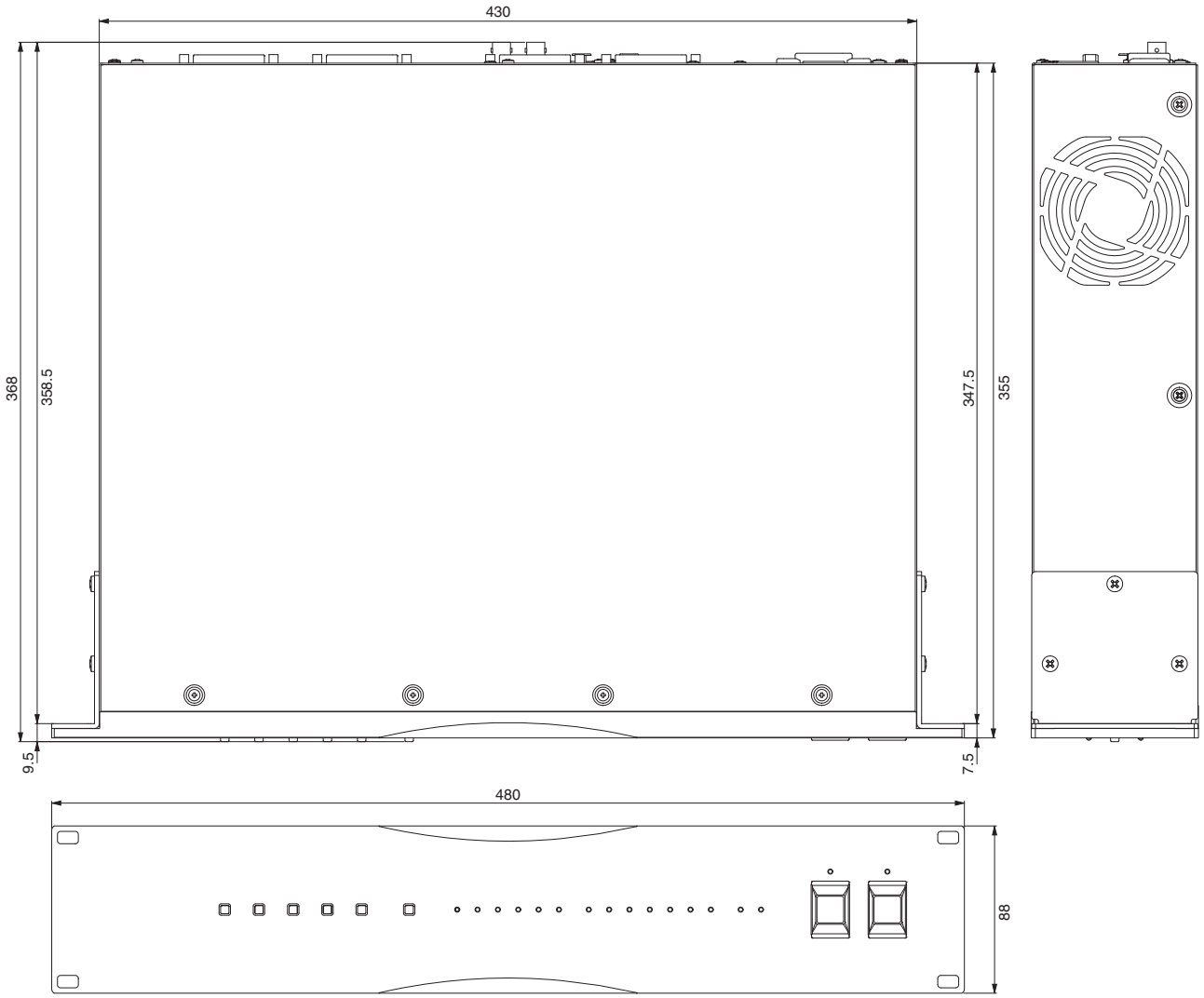
信号		GPI输入通道																打开	GND
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
针脚	IN、IN+	1	14	2	15	3	16	4	17	5	18	6	19	20	21	22	23	13	11, 12 24, 25
	IN+													7	8	9	10		

GPI [OUTPUT]接口



信号		GPI输出通道										打开	GND	+5V
		1	2	3	4	5	6	7	8	9	10			
针脚	OUT	1	2	3	4	5	6	7	8	9	10	13	11 24	12 25
	COM	14	15	16	17	18	19	20	21	22	23			

6-11.尺寸



单位:mm

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