

TAKSTAR® 得胜

EX-3 多功能数字功放

麦克风、DSP、后级三合一

Multifunctional Digital Power Amplifier
A Combination of MIC, DSP and Post-Amp



使用说明
User Manual

EX-3 多功能数字功放

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EX-3 多功能数字功放

■ 前言

尊敬的用户：

感谢您选购得胜EX-3多功能数字功放，为了您能够更好的了解使用本产品，建议您在使用前仔细阅读本说明书。

若存在有疑问或者您有宝贵的建议，可通过拨打得胜官方服务热线400 6828 333或微信扫描二维码关注得胜官方公众号与我们联系。



■ 产品特性

- 48KHz采样率，32-bit DSP处理器，24-bit AD/DA转换。
- 话筒通道带有主音量控制、相位、低切、9段参量均衡、噪声门、六级反馈控制器，以及4路话筒独立音量控制。
- 话筒效果带有主音量控制，回声有5段均衡，延时、重复参数可调；混响有延时、时间、空间、高低切参数可调、以及相位独立可调。
- 音乐通道带有主音量控制，音乐输入可以在VOD、OPT、COAX、BT之间切换，VOD/SPDIF输入时音量单独可调，带有5段参量均衡、噪声门等功能。
- 中置输出通道音量单独可调，带5段参量均衡、低切、压缩器、延时、相位和静音功能。
- 低音输出通道独立音量可调，带5段参量均衡，高低切、压缩器、延时、相位和静音功能。
- 前面板带有红外接收功能，DSP内置16种用户预设。
- 带有USB控制接口，安全可靠和容易操作。
- 高档5寸TFT彩色触控屏可以直接在上面控制音乐、话筒、效果的音量，以及调用预设、输入选择、蓝牙播放界面、话筒对频、电平显示等功能。
- 50兆带宽200个操作通道，PLL数字锁相环多信道频率合成。
- 内置2X450/8Ω瓦专业数字功放，用于主扩声系统。
- 开机延时保护音箱。
- 功放有防开/关机冲击功能。

手持无线麦克风：

- 专业的动圈式麦克风。
- LCD显示电池电量和当前频段。
- 使用两节AA电池，最长使用寿命4小时。
- 200个通道范围，高低功率切换。

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快速对频入门

为了使你的无线系统正常运行，无线手持麦克风和功放主机必须设置相同的工作频率。

设置主机：

- 一般的设置经验是主机和话筒保持在共同可见的视线范围之内，主机天线垂直放置。
- 将电源线与主机进行连接，打开面板电源开关。
- 使用标准的音箱接线柱将主机的输出与无源音箱进行连接。
- 在主界面，按下MICA/MIC B按键进入麦克风接收器设置屏幕，通过旋转编码器来改变频率，短按SYNC按键进行对频设置。



设置无线手持麦克风：

- 插入两节AA电池到无线麦克风，按下电源按钮打开无线麦克风电源。
- 主机前面板发射窗口与无线话筒下面的红外接收窗口相对，距离保持在15 - 30厘米。
- 在与主机对频时，屏幕框中进度条会闪烁，此时看到无线麦屏幕亮起，检查无线麦屏幕和主机上频道一致，即为对频成功。
- 同时长按主机面板上面EDIT编码器，回到主页面，或者等待10秒钟自动退出。

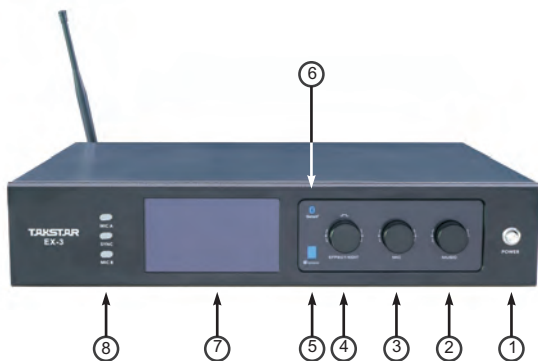


电平设置：

- 对着麦克风讲话或唱歌，或者你使用麦克风连接乐器，它是在正常的电平，慢慢的调节面板的音量以达到你想要的电平。
- 如果你发现系统有显示的断频或突发的噪声，或许是有其它频率的干扰，请按上面的步骤改变系统的频道。或者检查天线是否正确安装。

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■ 前面板



1、电源开关

开关用来打开或关闭主机，按下为开，弹起为关。

2、音乐音量

此旋钮用来调节输入音乐音量的大小，范围在00-99。

3、话筒音量

此旋钮用来调节话筒音量的大小，范围在00-99。

4、效果音量

此旋钮用来调节效果音量的大小，范围在00-99。同时也是编辑旋钮，设置一些参数时可以通过此编码器来改变。

5、红外发射和遥控窗口

在IR SENSOR窗口中对频（类似于我们通过遥控器选择一个电视频道），用这里去设置一个发送频道给手持麦。同时可以使用遥控器去操作功能。

6、蓝牙状态窗口

当连接上蓝牙后，此窗口中的LED灯会点亮，断开后是熄灭状态。

7、TFT触控屏

通过触控方式可以轻松控制话筒、效果、音乐的音量，以及调用预设、输入选择、蓝牙播放、话筒对频等功能。

8、对频功能键

按下MIC A时可以进入话筒A的对频界面，按下MIC B时可以进入话筒B的对频界面，通过编码器选择频率后，在按下SYNC可以对频

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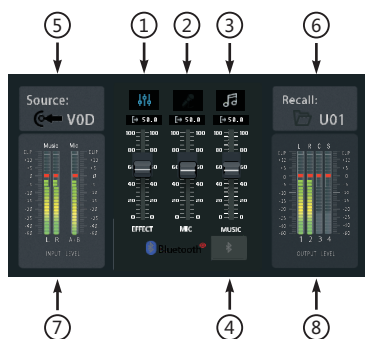
■ 后面板



- 1、BNC天线端子：允许充分旋转到最佳位置，在正常操作中，天线应该放置在一个垂直的位置。
- 2、USB端口：通过USB端口可以连接PC软件进行内部参数细调。
- 3、光纤同轴输入：可连接光纤和同轴数字信号的接口。
- 4、REC输出接口：如果需要录音的时候可连接此端口。
- 5、MIC 输入接口：可连接扩展另外两路的有线和无线话筒，通过PC软件可以匹配输入音量。
- 6、CENTER 和SUBWOOF XLR平衡输出：这两个输出端口可以连接超低音和中置音箱系统。
- 7、VOD输入：VOD音源输入接口。
- 8、功率输出接口：用于连接主音箱扩声系统，红色端接正极，黑色端接负极。
- 9、散热窗：用来散热，保证设备的正常运行。
- 10、交流电源输入插座：通过电源线与符合要求及匹配的交流电源相连。
- 11、保险丝：可以保护整机不被强电烧坏。

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■ LCD显示屏



一、主菜单显示：

- 1、效果音量。
- 2、话筒音量。
- 3、音乐音量。
- 4、蓝牙界面。
- 5、输入选择：VOD, OPT, COAX, BT四个选择。
- 6、用户预设选择：可以调取不同场景模式。
- 7、输入音量电平显示。
- 8、输出音量电平显示。

二、话筒接收显示界面



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■ 无线话筒

- 1、LCD显示：显示当前频率，通道和电池电量信息。
- 2、电源开关：短按打开电源，长按关闭电源。
- 3、高/低RF开关：高低发射功率。
- 4、电池架：插入两节标准的AA电池，一定要注意电池的极性不要接反。

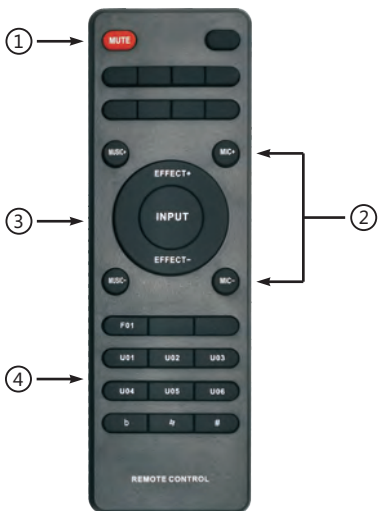
注意：不要向后插入电池，这样做会损害麦克风和你将得不到质量保证。



■ 遥控器

- 1、静音按键：按一下为静音，再按一下取消静音。
- 2、音量控制键：调节音乐，效果，话筒音量大小。
- 3、音源选择键：音源输入选择按钮，可以选择VOD、OPT、COAX、BT输入。
- 4、用户预设键：U01-U06为用户预设，你可以任意调用当前预设。

注意：遥控器只有在主菜单界面下才起作用，针对无线话筒显示界面无作用。



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■ PC软件

提示：所需PC控制软件和产品说明书都保存在附件的光盘

一、USB数据线连接方式：



二、USB数据连接步骤：

- 1、点击安装光盘上随机附送的PC控制软件，根据默认提示按“下一步”进行操作，直到软件安装成功后按“完成”退出。
- 2、将电脑和主机用USB数据线连接起来，打开主机电源，此时电脑会自动找到新硬件并且提示硬件已安装而且可以使用。
- 3、打开PC控制软件，PC软件会自动寻找USB并且联机，联机后右上角联机按键会变成绿色，并且显示“已联机”，说明软件与机器已联机成功，此时可以通过控制软件对主机进行操作。退出时同样先点击“已联机”按键，再关闭软件界面窗口即可。



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三、PC软件界面说明：



1、菜单栏：

可以进行整机数据的上传下载，单个预设文件的保存和调用，连机，面板锁操作，工作状态选择，推荐效果值选择以及中英文的界面切换等操作。

2、连机键：

一键式连机，绿色说明已连机,蓝色说明已断开连机。

3、参数调节区：

可以对所需要的通道功能进行详细的参数设置。

4、预设操作区：

可以进行单个预设的保存和调用，注意此时保存和调用的预设都是在机器里面。

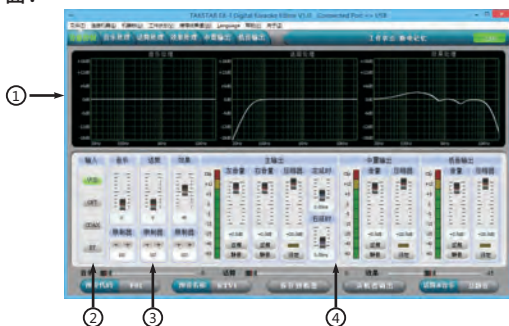
5、静音按钮：

可以控制所有音乐和话筒的静音和不静音。

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■ PC软件操作说明

一、音量控制界面：



- 1、显示当前音乐，话筒，效果的PEQ曲线状态。
- 2、输入音源选择：VOD、OPT、COAX、BT四路选择。
- 3、可以调整音乐，话筒，效果的音量以及限制器参数。
- 4、可以调整主输出，中置输出和低音输出的音量，延时，压缩器，相位功能，以及电平显示。

二、音乐处理界面



- 1、PEQ参量均衡曲线调节区域，通过拖动频点（小圆点）可以调整频率和增益参数，拖动小方块可以改变低切点的频率，点击“显示所有EQ参数”可以显示所有PEQ点的频率，增益，带宽参数，点击“EQ重置”可以将所有PEQ参数恢复到出厂默认值。
- 2、PEQ参量均衡参数显示区域，可以手动输入数据来改变相应频点的频率，Q值，增益，滤波类型（低架，高架，低切，高切）可选，以及旁路功能键。
- 3、PEQ参量均衡参数调整推杆，可以改变当前被选中的PEQ参数（频率，频宽，增益）。
- 4、可改变VOD和SPDIF输入的音量大小。
- 5、可以打开和关闭音乐输入噪声门功能。
- 6、可以对音乐的音量大小进行控制。

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三、话筒处理界面



- 1、PEQ参量均衡曲线调节区域，通过拖动频点（小圆点）可以调整频率和增益参数，拖动小方块可以改变低切点的频率，点击“显示所有EQ参数”可以显示所有PEQ点的频率，增益，带宽参数，点击“EQ重置”可以将所有PEQ参数恢复到出厂默认值。
- 2、PEQ参量均衡参数显示区域，可以手动输入数据来改变相应频点的频率，Q值，增益，滤波类型（低架，高架，低切，高切）可选，以及旁路功能键。
- 3、PEQ参量均衡参数调整推杆，可以改变当前被选中的PEQ参数（频率，频宽，增益）。
- 4、可以调整话筒的低切频率，低切的滤波类型选择有BUTTERWORTH-6dB--24dB/BESSEL-6dB--24dB/LINK-12dB--24dB，以及旁路按键。
- 5、反馈抑制有六个级别的选择，选择“关”按钮，不启动反馈抑制功能。
- 6、可以调整4路话筒的独立输入音量。
- 7、可以打开和关闭话筒输入噪声门功能。
- 8、可以对话筒总音量的大小进行控制，以及相应处理。

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四、效果处理界面



- 1、回声和混响的PEQ参数独立处理，通过拖动频点（小圆点）可以调整频率和增益参数，点击“显示所有EQ参数”可以显示所有PEQ点的频率，增益，带宽参数，点击“EQ重置”可以将所有PEQ参数恢复到出厂默认值。
- 2、PEQ参量均衡参数显示区域，可以手动输入数据来改变相应频点的频率，Q值，增益，滤波类型（低架，高架，低切，高切）可选，以及旁路功能键。
- 3、PEQ参量均衡参数调整推杆，可以改变当前被选中的PEQ参数（频率，频宽，增益）。
- 4、回声有单声和立体声选择，单声和立体声是两种不同的回声效果，单声状态时只有一个延时和一个重复参数可调；立体声状态时左右的延时和重复参数单独可调，以及回声的预延时可调。
- 5、混响的音量，时间,预延时，空间，高低切参数可调。
- 6、可调整效果的直达声参数。
- 7、可以对效果总音量的大小进行控制。

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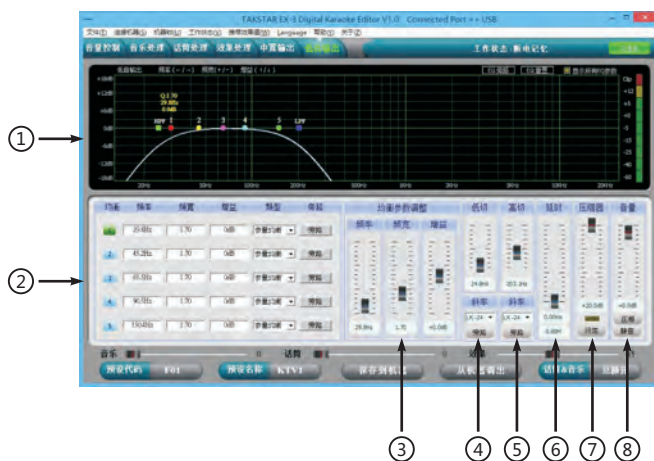
五、中置输出界面



- 1、PEQ参量均衡曲线调节区域，通过拖动频点（小圆点）可以调整频率和增益参数，点击“显示所有EQ参数”可以显示所有PEQ点的频率，增益，带宽参数，点击“EQ重置”可以将所有PEQ参数恢复到出厂默认值。
- 2、PEQ参量均衡参数显示区域，可以手动输入数据来改变相应频点的频率，Q值，增益，滤波类型（低架，高架，低切，高切）可选，以及旁路功能键。
- 3、PEQ参量均衡参数调整推杆，可以改变当前被选中的PEQ参数（频率，频宽，增益）。
- 4、中置输出的低切频率和斜率可调，以及旁路按键功能。
- 5、中置延时0-100ms可调。
- 6、压缩器的阀值可调，点设定键可设置比例，启动和恢复时间。
- 7、中置输出的音量独立可控，以及相位，静音控制。

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六、超低音输出处理界面



- 1、PEQ参量均衡曲线调节区域，通过拖动频点（小圆点）可以调整频率和增益参数，拖动小方块可以改变低切点的频率，点击“显示所有EQ参数”可以显示所有PEQ点的频率，增益，带宽参数，点击“EQ重置”可以将所有PEQ参数恢复到出厂默认值。
- 2、PEQ参量均衡参数显示区域，可以手动输入数据来改变相应频点的频率，Q值，增益，滤波类型（低架，高架，低切，高切）可选，以及旁路功能键。
- 3、PEQ参量均衡参数调整推杆，可以改变当前被选中的PEQ参数（频率，频宽，增益）。
- 4、可调整超低音的低切频率，调整范围20Hz-500Hz，低切滤波类型选择有BUTTERWORTH-6--24dB/BESSEL-6dB--24dB/LINK-12dB--24dB，以及旁路功能按键。
- 5、可调整超低音的高切频率，调整范围20Hz-500Hz，高切滤波类型选择有BUTTERWORTH-6dB--24dB/BESSEL-6dB--24dB/LINK-12dB--24dB。
- 6、超低音输出的延时参数可单独调整，0-100ms范围。
- 7、压缩器的阀值可调，点“设定”键可设置比例，启动和恢复时间。
- 8、低音输出的音量独立可控，以及相位和静音功能。

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■ 技术参数

无线MIC规格

频率范围：470-960MHz
频率响应：50Hz-16KHz
可调通道数量：200
震荡模式：PLL数字锁相环多信道频率合成
频率稳定度：±5ppm
调制方式：宽带FM
射频功率：高功率30mW；低功率10mW
失真度：≤0.3%
耗电量：高功率120mA；低功率100mA@3V
最大频偏：±50KHz
杂散抑制：80dBu
导频频率：30kHz/30.72KHz
最大使用距离：50m

DSP处理规格

频率响应：20Hz-20kHz,-0.5dB
信噪比：>105dBu
失真度：<0.01% at 1kHz (0dBu)
串音：>70dBu, 20Hz-20kHz
话筒输入端口：不平衡式 6.3mm JACK
话筒最大增益：30dBu
话筒输入阻抗：2KΩ
音乐输入端口：不平衡式RCA
音乐输入电平：+12dBu
音乐输入阻抗：1MΩ/Stereo
蓝牙输入：蓝牙 5.0、Class2 4dbM 频率 2.4G
光纤输入：24bit 48KHz
同轴输入：75Ω
前置输出端口：1组平衡式XLR、1组不平衡RCA
前置输出电平：+12dBu
前置输出阻抗：<500Ω
数字处理：32 bit DSP, 48kHz采样率, 24bit sigma-delta A/D、D/A转换
显示屏：5寸TFT带触控 480x854 (RGB)

功率部分规格

4Ω输入功率：750Wx2
8Ω输入功率：450Wx2
谐波失真 (THD)：<0.02%
频率响应：20Hz to 20kHz, +/-1dB
输入阻抗：10k
输入灵敏度：0dB
信噪比 (20Hz-20KHz, 40hms)：>100 dB
声道分离度 (1KHz, 40hms)：>70dB
阻尼 (10-400Hz, 80hms)：>300
输出级：Class D
保护：短路, DC output, 过热, 超载
开机延时：1S
输出插座：红黑香蕉插座

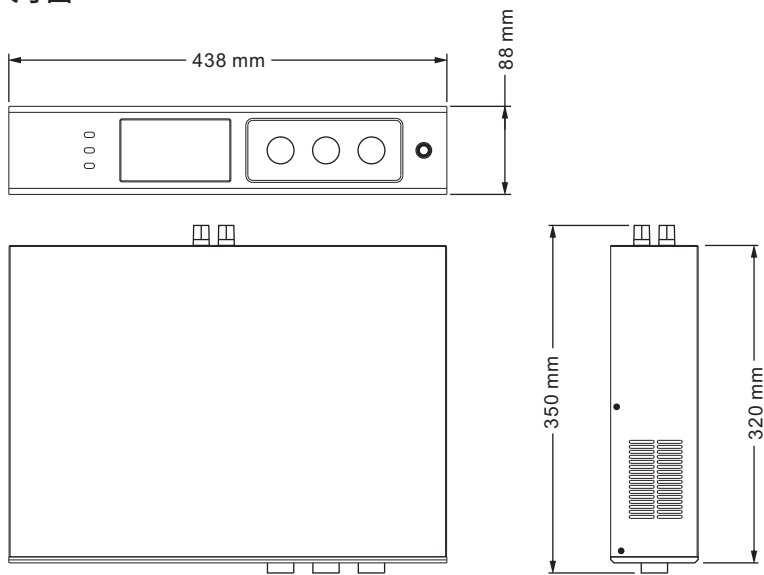
整机规格

电源：AC 220V 50Hz
重量 (Net)：6.6Kg
产品尺寸 (WXDXH)：438X350X88mm


注：以上数据由得胜实验室测试得到，并拥有最终解释权！

EX-3 多功能数字功放

■ 产品尺寸图



■ 安全预防措施


 三角形内带有箭头闪电状符号意在警告用户，表明产品内部有非绝缘的“危险电压”存在，而且具有足以致人触电的危险。

 三角形内的感叹号意在警告用户，表明与机器的操作和维护（维修）有关的重要说明。

警告：触电危险--勿打开！

警告：为了避免触电危险，请勿打开机壳。机内无用户可以维修的部件。需要维修时，请与指定的专业维修人员联系。

警告：为了避免触电或火灾危险，请勿将本机置于雨中或潮湿之处。请勿将装满液体的物体，例如花瓶等置于本机之上。使用本机之前，请仔细阅读本操作说明书中的安全说明。

 保护接地端子。设备应该连接到带有保护接地连接的电源插座。

EX-3 多功能数字功放

■ 安全警示

为避免电击、高温、着火、辐射、爆炸、机械危险以及使用不当等可能造成的人身伤害或财产损失，使用本产品，请仔细阅读并遵守以下事项：

1. 使用产品时请确认所连接设备与本产品功率是否匹配以及合理调整音量大小，不要在超过产品功率及大音量下长时间使用，以免造成产品异常和听力损伤；
2. 使用中若发现有异常（如冒烟、异味等），请立即关闭电源开关并拔掉电源插头，然后将产品送经销商检修；
3. 本产品及配件都应放置在室内干燥通风处，勿长期存放在潮湿、灰尘多的环境，使用中避免靠近火源、雨淋、进水、过度碰撞、抛掷、振动本机及覆盖通风孔，以免损坏其功能；
4. 若产品需要固定于墙壁或天花板上时，请确保固定到位，防止因固定强度不足导致产品发生跌落危险；
5. 使用该产品时需遵守相关安全规定，法律法规明确禁止使用场合请勿使用本机，以免导致意外事故；
6. 请不要自行拆机改装或维修，以防止出现人身伤害，如有问题或服务需求请联系当地经销商跟进处理。



仅适用于海拔2000
米以下地区使用



仅适用于非热带
气候条件下使用

EX-3 Multifunctional Digital Power Amplifier

■ Preface

Dear Customer,

Thank you for purchasing TAKSTAR EX-3 Multifunctional Digital Power Amplifier. Please read the user manual carefully before use and keep it for future reference.

If you have any questions or suggestions, please contact our local dealer.

■ Features

- 48kHz sampling rate, 32-bit DSP chip, 24-bit AD/DA conversion
- MIC channel with master volume control, phase, low cut, 9-band PEQ, noise gate, feedback controller and 4-way MIC independent volume control
- MIC effect with master volume control; echo with adjustable 5-band PEQ, delay and repetition; reverb with adjustable delay, time, space, high cut and low cut; independent phase control
- Music channel with master volume control; VOD, OPT, COAX, or BT for music input; independent volume control, 5-band PEQ and noise gate for VOD/SPDIF input
- Center output channel with independent volume control, 5-band PEQ, low cut, compressor, delay, phase and mute
- Bass output channel with independent volume control, 5-band PEQ, high cut, low cut, compressor, delay, phase and mute
- Front panel with IR receiving function, DSP with 16 user presets
- USB control interface for safe and easy operation
- High-end 5" TFT color touch screen for you to directly control the volumes of music, microphone and effect, and to perform functions of calling presets, inputting selection, Bluetooth playback interface, microphone frequency matching and level display
- 50M bandwidth, 200 channels, PLL digital phase-locked loop multi-channel frequency synthesis
- Built-in 2X450/8Ω professional digital power amplifier for the main sound reinforcement system
- Startup delay to protect speakers
- Power amplifier with the anti-shock function when powering on/off

Handheld Wireless Microphone:

- Professional dynamic microphone
- LCD to display battery power and current frequency band
- Two AA batteries for the operation time of 4 hours
- 200 channels available for the switching between high power and low power

EX-3 Multifunctional Digital Power Amplifier

■ Quick Introduction to Frequency Matching

To make your wireless system work normally, the wireless handheld microphones and the power amplifier must be set to the same operating frequency.

Main Unit Settings:

- The general setup method is that the main unit and microphones are kept within sight and the antenna is placed vertically.
- Connect the power cord to the main unit and turn on the panel power switch.
- Use standard speaker binding posts to connect the outputs of the main unit to passive speakers.
- In the main interface, press the MIC A/MIC B button to enter the microphone receiver setting screen, rotate the encoder to change the frequency, and press the SYNC button to set the frequency.



Wireless Handheld Microphone Settings:

- Insert two AA batteries into the wireless microphone and press the power button to turn it on.
- The emitting window on the front panel of the main unit should be placed opposite to the infrared receiving window on the wireless microphone, and the distance should be kept at 15-30 cm.
- When the microphone is pairing with the main unit, the progress bar on the main unit screen will flash, and the wireless microphone screen will light up. When the channel on the wireless microphone screen is the same as that on the main unit screen, the pairing is successful.
- Long press the EDIT encoder on the panel to return to the main interface, or wait 10 seconds

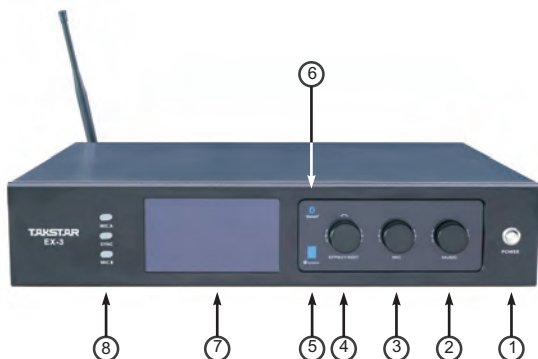
Level Settings:

- When speaking or singing into the microphone, or using the microphone to connect to an instrument, it is at a normal level. Slowly adjust the volume of the panel to reach the level you want.
- If you find that the system shows frequency interruption or burst noise, it may be due to interference from other frequencies. Please follow the steps above to change the channel of the system, or check whether the antenna is installed correctly.



EX-3 Multifunctional Digital Power Amplifier

■ Front Panel



1. Power Switch

The switch is used to turn on or off the main unit.

2. Music Volume

This knob is used to adjust the volume of the input music in the range of 00-99.

3. Microphone Volume

This knob is used to adjust the volume of the microphone in the range of 00-99.

4. Effect Volume

This knob is used to adjust the volume of the effect in the range of 00-99. It is also an editing knob, which can be used to change some parameters.

5. IR SENSOR Window

You can match the frequency in the IR SENSOR window (similar to selecting a TV channel through a remote control) and set a channel for the handheld microphone. You can also use the functions with the remote control.

6. Bluetooth Window

The LED in this window will light up when Bluetooth is connected and light off when Bluetooth is disconnected.

7. TFT Touch Screen

Through touch control, you can easily control the volumes of microphone, effect and music, as well as the functions of calling presets, inputting selection, Bluetooth playback and microphone frequency matching.

8. Function Keys for Frequency Matching

Press MIC A to enter the frequency matching interface of microphone A and press MIC B to enter the frequency matching interface of microphone B. After selecting the frequency through the encoder, press SYNC to complete the frequency matching.

EX-3 Multifunctional Digital Power Amplifier

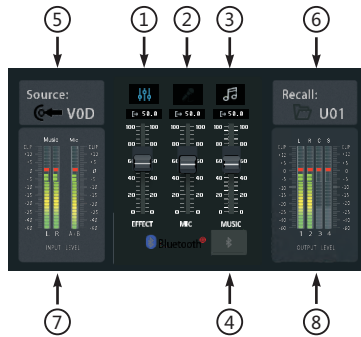
■ Rear Panel



1. BNC Antenna Connector: Allow full rotation to the best position. In normal operation, the antenna should be placed in a vertical position.
2. USB Port: Connect to the PC software through the USB port for the fine adjustment of internal parameters.
3. Optical Fiber Coaxial Input: It is an interface for optical fiber signal and coaxial digital signal.
4. REC Output Interface: It can be connected when recording is needed.
5. MIC Input Interfaces: Connect and expand the other two wired and wireless microphones. The input volume can be matched through PC software.
6. CENTER & SUBWOOF XLR Balanced Outputs: These two output ports can be connected to subwoofers and center speakers.
7. VOD Input: VOD audio input interface.
8. Power Output Interfaces: Used to connect main speakers, with the red terminal connected to the positive pole and the black terminal connected to the negative pole.
9. Heat Dissipation Window: It is used to dissipate heat and ensure the normal operation of the equipment.
10. AC Power Input Socket: Connect to a qualified and matched AC power supply through a power cord.
11. Fuse: Protect the whole machine from being burnt out by strong electricity.

EX-3 Multifunctional Digital Power Amplifier

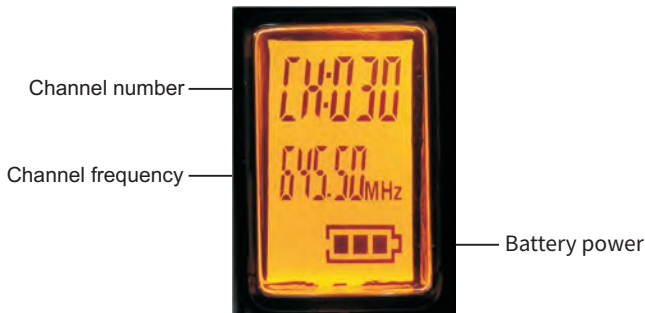
■ LCD Display



I Main Menu Display:

1. Effect Volume
2. Microphone Volume
3. Music Volume
4. Bluetooth Interface
5. Input Selection: VOD, OPT, COAX, BT
6. User Preset Selection: Different scene modes can be called.
7. Input Level Display
8. Output Level Display

II Microphone receiving display interface



EX-3 Multifunctional Digital Power Amplifier

■ Wireless Microphone

1. LCD Display: Display current frequency, channel and battery power.
2. Power Switch: Press it to turn on the power and long press it to turn off the power.
3. High/Low RF Switch: high and low transmit power.
4. Battery Holder: Insert two standard AA batteries, and make sure not to reverse the polarity of the batteries.

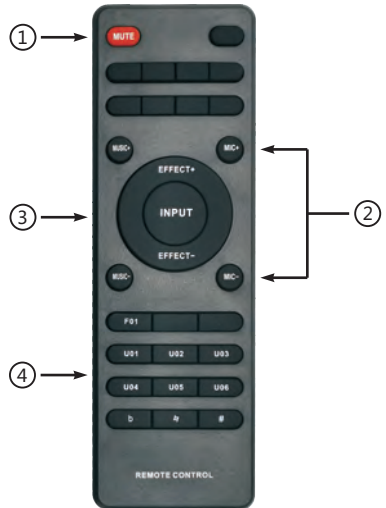
Note: Do not insert the batteries backward because it will damage the microphone and you will not get a warranty.



■ Remote Control

1. Mute Button: Press it for the mute function and press it again to cancel the mute function.
2. Volume Control Buttons: Adjust the volumes of music, effect and microphone.
3. Source Select Button: Choose from VOD, OPT, COAX, BT.
4. User Preset Buttons: U01-U06 are user presets, and the current preset can be called.

Note: The remote control only works in the main menu interface, but not in the wireless microphone display interface.



EX-3 Multifunctional Digital Power Amplifier

■ PC Software

Reminder: The required PC control software and product manual are saved in the attached CD.

I USB Data Cable Connection



II Steps of USB Cable Connection :

1. Click and install the PC control software. Press "Next" according to the default prompts until the software is successfully installed and then press "Finish" to exit.
2. Connect the computer to the main unit with a USB data cable, and turn on the power of the main unit. The computer will automatically find the new hardware and prompt that the hardware is installed and ready for use.
3. When you open the PC control software, it will automatically search for the USB and connect to the main unit. After connection, the connection button in the upper right corner will turn green and display "Connected", indicating that the software and the main unit have been successfully connected. Now you can operate the main unit through the software. When exiting, click the "Connected" button first, and then close the software interface window.



EX-3 Multifunctional Digital Power Amplifier

III PC Software Interface Instructions:



1. Menu Bar:

It can conduct operations of uploading and downloading the whole machine data, saving and calling a single preset file, connecting the main unit, operating panel lock, selecting work status, selecting recommended effect value, and switching between Chinese interface and English interface.

2. Connection Button:

One-button connection with green light meaning "Connected" and blue light meaning "Disconnected".

3. Parameter Adjustment Area:

Conduct detailed parameter setting to the required channel function.

4. Preset Operation Area:

A single preset can be saved and called, and the preset saved and called are in the main unit.

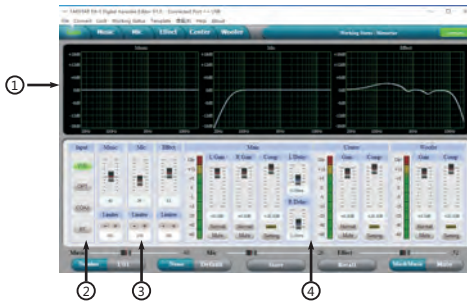
5. Mute Button:

You can mute and unmute all music and microphones with this button.

EX-3 Multifunctional Digital Power Amplifier

PC Software Operation Instructions

I Volume Control Interface:



1. Display the current PEQ curve status of music, microphone and effect.
2. Audio source selection: VOD, OPT, COAX, BT.
3. You can adjust the limiter parameters as well as the volumes of music, microphone, and effect.

II Music Processing Interface



1. The adjustment area of PEQ curve: Adjust the frequency and gain parameters by dragging the frequency point (small dot), and change the frequency of the low cut point by dragging the small square. Click "Show all EQ parameters" to display the frequency, gain, and bandwidth parameters of all PEQ points, and click "EQ reset" to restore all PEQ parameters to factory default.
2. The display area of PEQ parameters: You can manually input data to change the frequency, Q value and gain of the corresponding frequency point. Filter types (low shelf, high shelf, low cut, high cut) and bypass function keys are available.
3. The PEQ parameter slider can change the currently selected PEQ parameters (frequency, bandwidth, gain).
4. The volumes of VOD and SPDIF inputs can be changed.
5. The noise gate function of music input can be turned on and off.
5. The volume of music can be controlled.

EX-3 Multifunctional Digital Power Amplifier

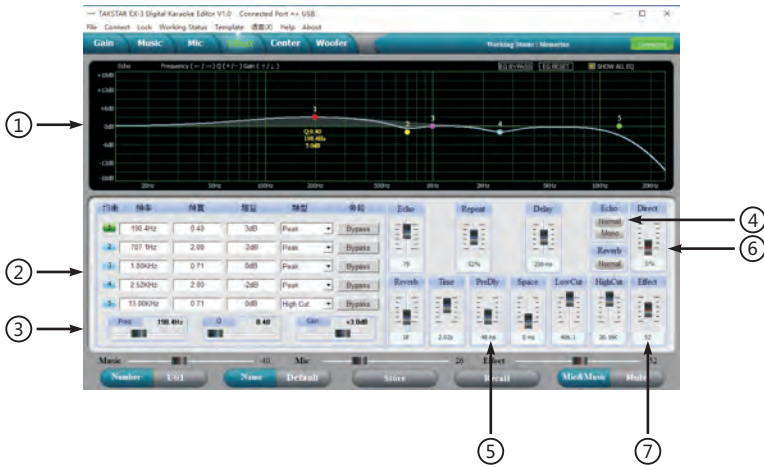
III Microphone Processing Interface



1. The adjustment area of PEQ curve: Adjust the frequency and gain parameters by dragging the frequency point (small dot), and change the frequency of the low cut point by dragging the small square. Click "Show all EQ parameters" to display the frequency, gain, and bandwidth parameters of all PEQ points, and click "EQ reset" to restore all PEQ parameters to factory default.
2. The display area of PEQ parameters: You can manually input data to change the frequency, Q value and gain of the corresponding frequency point. Filter types (low shelf, high shelf, low cut, high cut) and bypass function keys are available.
3. The PEQ parameter slider can change the currently selected PEQ parameters (frequency, bandwidth, gain).
4. The low-cut frequency of the microphone can be adjusted. The low-cut filter types of BUTTERWORTH-6dB--24dB/ BESSEL-6dB--24dB/LINK-12dB--24dB and a bypass function key are available.
5. There are six levels of feedback suppression. Press the "Off" button to turn off the feedback suppression function.
6. The independent input volumes of 4 microphones can be adjusted.
7. The noise gate function of MIC input can be turned on and off.
8. The total MIC volume can be controlled and handled accordingly.

EX-3 Multifunctional Digital Power Amplifier

IV Effect Processing Interface



1. Independent processing of the PEQ parameters of echo and reverb: Adjust the frequency and gain parameters by dragging the frequency point (small dot). Click "Show all EQ parameters" to display the frequency, gain, and bandwidth parameters of all PEQ points, and click "EQ reset" to restore all PEQ parameters to factory default.
2. The display area of PEQ parameters: You can manually input data to change the frequency, Q value and gain of the corresponding frequency point. Filter types (low shelf, high shelf, low cut, high cut) and bypass function keys are available.
3. The PEQ parameter slider can change the currently selected PEQ parameters (frequency, bandwidth, gain).
4. There are mono and stereo options for echo. Mono and stereo are two different echo effects. In the mono state, only one delay and one repetition parameter can be adjusted; in the stereo state, the left and right delay and repetition parameters can be adjusted separately, so is the pre-delay of echo.
5. The volume, time, pre-delay, space, high cut and low cut of the reverb can be adjusted.
6. The direct sound parameters of the effect can be adjusted.
7. The total effect volume can be controlled.

EX-3 Multifunctional Digital Power Amplifier

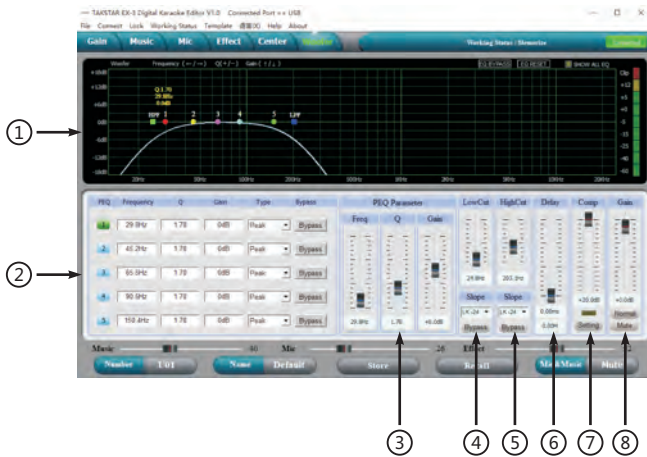
V Center Output Interface



1. The adjustment area of PEQ curve: Adjust the frequency and gain parameters by dragging the frequency point (small dot). Click "Show all EQ parameters" to display the frequency, gain, and bandwidth parameters of all PEQ points, and click "EQ reset" to restore all PEQ parameters to factory default.
2. The display area of PEQ parameters: You can manually input data to change the frequency, Q value and gain of the corresponding frequency point. Filter types (low shelf, high shelf, low cut, high cut) and bypass function keys are available.
3. The PEQ parameter slider can change the currently selected PEQ parameters (frequency, bandwidth, gain).
4. The low-cut frequency and slope of the center output are adjustable, and there is a bypass function key.
5. The center delay is adjusted in the range of 0-100ms.
6. The threshold value of the compressor is adjustable. Click the "Set" button to set the ratio, start time and recovery time.
7. The volume of the center output is independently controllable, so are the phase and mute functions.

EX-3 Multifunctional Digital Power Amplifier

VI Bass Output Processing Interface



1. The adjustment area of PEQ curve: Adjust the frequency and gain parameters by dragging the frequency point (small dot), and change the frequency of the low cut point by dragging the small square. Click "Show all EQ parameters" to display the frequency, gain, and bandwidth parameters of all PEQ points, and click "EQ reset" to restore all PEQ parameters to factory default.
2. The display area of PEQ parameters: You can manually input data to change the frequency, Q value and gain of the corresponding frequency point. Filter types (low shelf, high shelf, low cut, high cut) and bypass function keys are available.
3. The PEQ parameter slider can change the currently selected PEQ parameters (frequency, bandwidth, gain).
4. The low-cut frequency of the subwoofer can be adjusted in the range of 20Hz-500Hz. Low-cut filter types include BUTTERWORTH -6dB/-24dB/BESSEL-6dB/-24dB/LINK-12dB/-24dB, and there is a bypass function key.
5. The high-cut frequency of the subwoofer can be adjusted in the range of 20Hz-500Hz. High-cut filter types include BUTTERWORTH-6dB--24dB /BESSEL-6dB--24dB/LINK-12dB--24dB.
6. The delay parameter of the subwoofer output can be adjusted separately in the range of 0-100ms.
7. The threshold value of the compressor is adjustable. Click the "Set" button to set the ratio, start time and recovery time.
8. The volume of the bass output is independently controllable, so are the phase and mute functions.

EX-3 Multifunctional Digital Power Amplifier

■ Specifications

Wireless MIC Specifications

Frequency Range: 470-960MHz
Frequency Response: 50Hz-16KHz
Number of Adjustable Channels: 200
Oscillation Mode: PLL digital phase-locked loop multi-channel frequency synthesis
Frequency Stability: ± 5 ppm
Modulation Method: broadband FM
RF Power: high power: 30mW; low power: 10mW
Distortion: $\leq 0.3\%$
Power Consumption: high power 120mA; low power 100mA@3V
Maximum Frequency Deviation: ± 50 KHz
Spurious Suppression: 80dBu
Pilot Frequency: 30kHz/30.72kHz
Operating Range: 50m

DSP Specifications

Frequency Response: 20Hz-20kHz, -0.5dB
S/N Ratio: >105dBu
Distortion: <0.01% at 1kHz (0dBu)
Crosstalk: >70dBu, 20Hz-20kHz
MIC Input Jack: unbalanced 6.3mm JACK
MIC Max Gain: 30dBu
MIC Input Impedance: 2K Ω
Music Input Jack: unbalanced RCA
Music Input Level: +12dBu
Music Input Impedance: 1M Ω /Stereo
Bluetooth Input: Bluetooth 5.0, Class2 4dBm frequency: 2.4G
Fiber Input: 24bit 48KHz
Coaxial Input: 75 Ω
Front Output Port: 1 set of balanced XLR, 1 set of unbalanced RCA
Front Output Level: +12dBu
Front Output Impedance: <500 Ω

Digital Processing: 32-bit DSP, 48kHz sampling rate, 24-bit sigma-delta A/D, D/A conversion

Display: 5" TFT with touch control 480x854 (F31)

Note: The data is tested by Takstar Laboratory, and Takstar has the final interpretation right!

Power Specifications

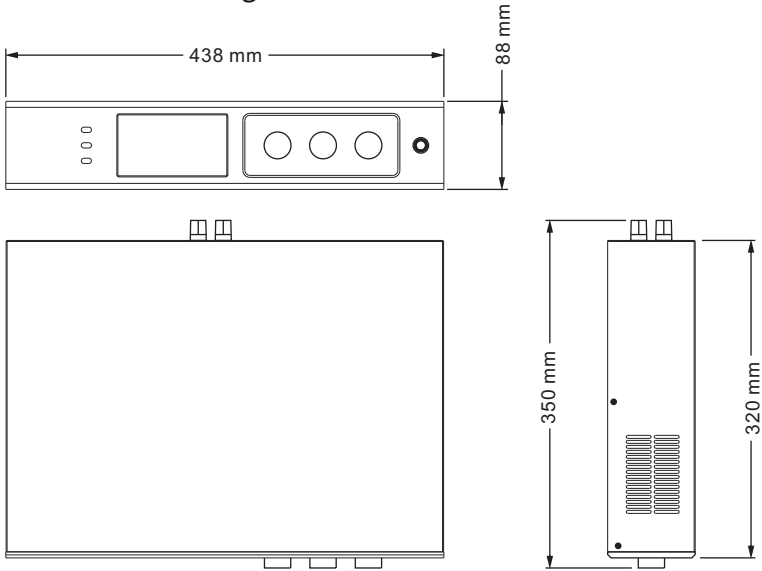
4 Ω Input Power: 750Wx2
8 Ω Input Power: 450Wx2
THD: <0.02%
Frequency Response: 20Hz-20kHz, +/-1dB
Input Impedance: 10k
Input Sensitivity: 0dB
S/N Ratio (20Hz-20KHz, 40ohms): >100 dB
Channel Separation (1KHz, 40ohms): >70dB
Damping Factor (10-400Hz, 80ohms): >300
Output Stage: Class D
Protection: short circuit, DC output, overheating, overload
Startup Delay: 1S
Output Socket: red and black banana socket

Other Specifications

Power Supply: AC 220V 50Hz
Weight (Net): 6.6Kg
Dimensions (WXDXH): 438X350X88mm

EX-3 Multifunctional Digital Power Amplifier

■ Product Dimensions Diagram



■ Safety Precautions



The lightning bolt with an arrow in the triangle is intended to warn users that there is a non-insulated "dangerous voltage" inside the product strong enough to cause electric shock.



The exclamation mark in the triangle is intended to show users important instructions related to the operation and maintenance (repair) of the product.

Warning: Risk of electric shock-do not open!

Warning: To avoid the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. When maintenance is needed, please contact the designated professional personnel.

Warning: To avoid the risk of electric shock or fire, do not place the product in rain or damp places. Do not place objects filled with liquids, such as vases, on the product. Before using this product, please read the safety instructions in this manual carefully.



Protect the ground terminal. The equipment should be connected to a power socket with earthing protection.

EX-3 Multifunctional Digital Power Amplifier

■ Safety Instructions

To avoid possible personal injury or property damage caused by electric shock, high temperature, fire, radiation, explosion, mechanical hazards, and improper use, please read and observe the following items before using the product.

1. When using the product, please confirm whether the power of the connected device matches the power of the product, and adjust the volume of the device. Do not use it for a long time when the power of the product is exceeded or at a high volume to avoid product failure and hearing damage.
2. If there is any abnormality (such as smoke, odor, etc.) during use, please turn off the power switch and unplug the power plug immediately, and then send the product to the dealer for maintenance.
3. The product and accessories should be placed indoors in a dry and ventilated place. Do not store them in a humid and dusty environment for a long time. Avoid getting close to fire, rain, water, excessive collision, throwing, vibrating the machine and covering the ventilation holes during use, so as not to damage its function.
4. If the product needs to be fixed on the wall or ceiling, please make sure to fix it in place to prevent it from falling.
5. When using the product, you must abide by the relevant safety regulations. Please do not operate the product on occasions that are prohibited by laws and regulations to avoid accidents.
6. Please do not disassemble, refit, or repair the product by yourself to prevent personal injury. If you have any questions or service needs, please contact the local dealer.



Only suitable for use in areas below 2000 meters above sea level



Only suitable for use in non-tropical climates

注意事项:

1. 本单为保修凭证, 请用户妥善保管, 如有遗失, 恕不保修或退换。
2. 保修期限制: 购买之日起十二个月内。
3. 除了不可抗力事件损坏外, 由本公司负责, 免费维修。
4. 如属保管不善或使用不当造成的损坏, 维修点将酌情收费。
5. 擅自拆卸维修者, 不予保修。
6. 以上保修条款仅限于中国市场适用 (不含港澳台地区)。

产品服务保证书

姓名: _____ 电话: _____ 地址: _____
商品: _____ 型号: _____ 购买日期: _____ 年 _____ 月 _____ 日

维修记录栏 (由维修员填写)	维修员签名	日期

◆ 广东得胜电子有限公司 ◆ 电话: 400-6828-333 ◆ 地址: 广东省惠州市博罗县龙溪街道雷康一路2号



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Tel: 86 752 6383644 Fax: 86 752 6383952
Email: sales@takstar.com
Website: www.takstar.com