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TAKSTAR® 得胜

TU 系列专业功率放大器

TU Series Professional Power Amplifier



使用说明

User Manual

产品介绍

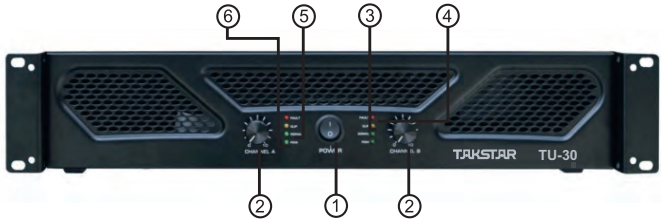
TU系列是一款模拟功率放大器，Class-AB+环牛供电2U外观设计。模拟功放具有声音甜美，中高频细腻低频有力的特征。EA系列前面板带有精准的控制旋钮，开机时LED指示灯可显示系统的动作状态，从后排到前排的冷却系统确保了机器高性能稳定运行。EA系列非常稳定，应用广泛，特别适合会议系统和娱乐系统。

产品特性

- ＊Class-AB+环牛供电设计。
- ＊模拟功放具有声音甜美，中高频细腻低频有力的特征。
- ＊前面板精准增益控制，有电源，信号，保护和削波的工作信号灯。
- ＊每能算独特全自动保护电路设计，保护功能有直流，过热，过载以及限幅。
- ＊从后排到前排的散热排风系统设计，确保设备长时间，高可靠运行和使用。
- ＊采用平衡XLR输入接口和专业SPEAKON 输出接口。
- ＊后排拨码开关用于选择单声道，立体声或桥接工作模式。

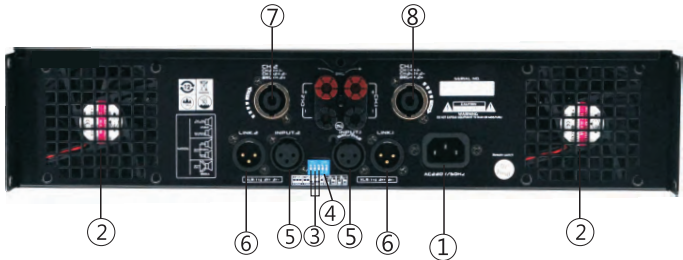
功能说明

前面板：



- 1.电源开关
当按下此键时，功放的软启动防浪涌冲击电路开始工作，约3~4秒后，可听见“咔嚓”一声，软启动工作完成，再1~2秒。又听见“咔嚓”声，此时已进入工作状态。
- 2.CH-1/CH-2输入电平调整旋钮
调整这个旋钮至所需的音量大小。当远离扬声器时可参照面板上的刻度进行调整。
- 3.CH.A/CH.B峰值指示灯
有两种情况指示灯会亮：
① 当功放的输出功率达到最大值，将要出现削波时，指示灯点亮，此时注意适当降低输入电平。
② 当有信号输入而扬声器无声，指示灯连续不断地亮，这时确定为负载短路，应关掉功放电源，清除短路再恢复工作。
- 4.CH .A/CH.B保护指示灯
有四种情况指示灯会亮：
① 开机后3~5 秒。②.过载保护 ③.直流保护。
② 当功率器件的工作温度超过90度。
③ 当功放出现异常时。
- 5.C H .A/CH.B信号指示灯
当功放进入正常工作状态且有信号输出时，该指示灯点亮。
- 6.电源指示灯

后面板：



1. 电源输入
2. 风扇和通风孔：功放在操作时会产生热量，要保证此处没被任何物品遮挡。
3. 输出模式选择开关：用户可选择立体声、并联，桥接三种模式
4. 输入灵敏度选择开关：功放输入灵敏度可选择1. 0V/1. 4V (4拨码为CH. 2通道/5拨码为CH. 1通道)
5. CH.1/CH.2XLR 信号输入: 使用一个标准的 XLR （母）插座，其接线方法为:1 脚:GND (地) 2脚: POS (+) 3脚:NEG (-)
6. CH.1/CH.2XLR 信号输出: 使用一个标准的 XLR (公) 插座，与同样为 XLR (母) 连接使用可以将同一个信号输出到另外一台功放，接线方法为:1脚: GND (地)、2脚: POS (+)、3脚: NEG (-)
7. CH.2SPEAKON输出
使用专业的 SPEAKON 连接器：CH.2输出:1+, 1-; CH.1输出: 2+, 2-; BRG:1+,2-;
8. CH.1SPEAKON 输出
使用专业的 SPEAKON 连接器：CH.1输出:1+, 1-; CH.2输出: 2+, 2-; BRG:1+,2-;

NOTE

- ▲ The company reserves the right to change product design specifications without prior notice.
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技术参数

型号			TU-30	TU-45
额定输出功率(1KHz 1%THD)	立体声	8 Ω	300W+300W	450W+450W
		4 Ω	450W+450W	600W+600W
	桥接	8 Ω	800W	1150W
输出接口			Binding for Stereo & Bridge Output	
频响			20Hz-20KHz	
输入灵敏度			1.0V;1.4V	
平衡输入阻抗			20k/Balanced, 10k/un-Balanced	
信噪比			110dB	
失真度			<0.01 %(8ohms/1KHz/half power)	
额定输出功率 8 OHMS 1KHz 时分离度			82dB	
阻尼系数f=1KHz8 OHMS			300	
转换速率			20V/μS	
保护			Soft Start,Short Circuit,Limiter,DC Fault,AC Line Fuse,Thermal Cut	
冷却系统			Two steps speed fan	
电源			AC: 220 -240V 50Hz	
净重 (kg)			11.8kg	12.4kg
尺寸 (WxDxH)			483x88x410mm	

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；

产品服务保证卡

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（不包含港澳台地区）。

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富康一路2号

02

TU Series Professional Power Amplifier

Introduction

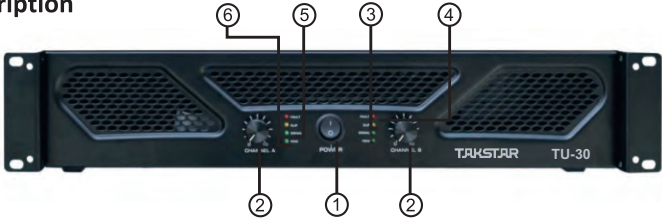
Our TU series is a type of analog power amplifier with Class-AB design, at 2U rack size. These analog amplifiers are featured by their enjoyable sound, delicate MFHF and punchy LF. There are two precise control knobs and several LED indicators on the front panel, and a cooling system from rear to front which ensures stable performance. Overall, it is very reliable and versatile, especially suitable for conference or entertainment system.

Features

- * Class-AB design with toroidal power supply.
- * Analog amplifier, featured by enjoyable sound, delicate MFHF and punchy LF.
- * Precise gain controls, power/signal/protection/clip LEDs on the front panel.
- * DC/thermal/over-load/limiter protection circuit design on each channel.
- * Rear-to-front fan cooling for prolonged and reliable operation.
- * Balanced XLR input connector and pro SPEAKON output connector.
- * Toggle switch on the rear panel to select Stereo/Parallel/Bridge mode.

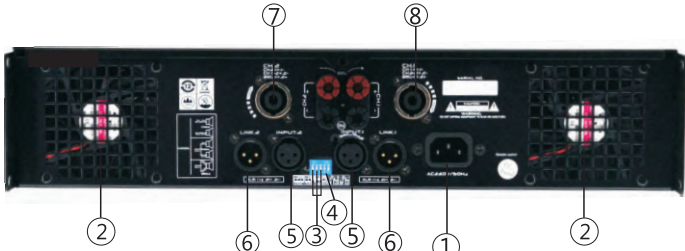
Function Description

Front Panel



- 1.Power Switch
By pressing this button, the soft-start anti-surge circuit will engage, and after 3~4s, the soft boot will complete when you hear a “click” sound. Wait another 1~2s until another “click” sound, then the device will be in operation status.
- 2.CH-1/CH-2 Input Level Control Knob
Adjust this knob to control the volume to a desired level.
- 3.CH.A/CH.B Peak LED
This LED indicator illuminates in two scenarios:
1)When the amplifier output power reaches maximum and clipping is about to occur, at which point you should properly lower the input level.
2)When there is signal input but no sound on the speaker, the indicator flashes continuously. This is due to a load short-circuit, in which case you should turn off the amplifier power and resolve the short circuit issue before resuming operation.
- 4.CH.A/CH.B Protection LED
This LED indicator illuminates in four scenarios:
a). 3~5s after bootup; b). Overload protection; c). DC protection; d). Device operating temperature exceeds 90°C; e). amplifier malfunction.
- 5.CH.A/CH.B Signal LED
This LED indicator illuminates when the amplifier is in normal work status and there is signal output.
- 6.Power LED

Rear Panel



- 1.Power Input
- 2.Fan and ventilation opening: the amplifier generates heat when running, therefore DO NOT block.
- 3.Output Mode Selection: select either Stereo/Parallel/Bridge.
- 4.Input Sensitivity Selection: select either 1.0V/1.4V (flip#4 corresponds to CH.2, and flip#5 to CH.1)
- 5.CH.1/CH.2 XLR Signal Input: a standard XLR (Female) connector; Pin1: GND (Ground), Pin2: POS (+), Pin3 NEG (-).
- 6.CH.1/CH.2 XLR Signal Output: a standard XLR (Male) connector, which can transfer signal to another amplifier by connecting to its XLR (Female) connector; Pin1: GND (Ground), Pin2: POS (+), Pin3: NEG (-).
- 7.CH.2 SPEAKON Output
A professional SPEAKON connector: CH.2 Output: 1+, 1-; CH.1 Output: 2+, 2-; BRG: 1+, 2-.
- 8.CH.1 SPEAKON Output
A professional SPEAKON connector: CH.1 Output: 1+, 1-; CH.2 Output: 2+, 2-; BRG: 1+, 2-.

TU Series Professional Power Amplifier

Technical Specifications

Model			TU-30	TU-45
Rated Output Power (1KHz, 1% THD)	Stereo	8 Ω	300W+300W	450W+450W
		4 Ω	450W+450W	600W+600W
	Bridge	8 Ω	800W	1150W
Output Connector			Binding for Stereo & Bridge Output	
Frequency Response			20Hz-20KHz	
Input Sensitivity			1.0V; 1.4V	
Input Impedance (bal/unbal)			20k /Balanced, 10k /un-Balanced	
S/N Ratio			110dB	
Distortion			<0.01% (8ohms/1KHz/half power)	
Crosstalk (at rated output power, 1KHz, 8 Ohms)			82dB	
Damping Factor (1KHz, 8 Ohms)			300	
Conversion Rate			20 V/uS	
Protection			Soft Start, Short Circuit, Limiter, DC Fault, AC Line Fuse, Thermal Cut	
Cooling System			Two steps speed fan	
Power Requirement			AC:220-240V 50Hz	
Net Weight (kg)			11.8kg	12.4kg
Dimension (W*D*H)			483x88x410mm	

Safety Instructions

- To avoid electric shock, overheating, fire, radiation, explosion, mechanical risk and injury or property loss due to improper use, please read and observe the following items before use:
- 1.Please check if the power of the connected equipment matches with that of this product before operation. Adjust the volume to proper level during operation. Do not operate at over-power or high-volume level for extended time to avoid product malfunction or hearing impairment.
 - 2.If there is any abnormality during use (e.g., smoke, strange odor), please kill the power switch and unplug from power source, then send the product to the local dealer for repair.
 - 3.Keep this product and its accessories in a dry and ventilated area. Do not store in a humid or dusty area for extended time. Keep away from fire, rain, liquid intrusion, bumping, throwing, vibrating, or from blocking any ventilation openings, to prevent malfunction.
 - 4.The product must, when installed on walls or ceilings, be fixed firmly in place at adequate strength to prevent from falling.
 - 5.Please abide by safety rules during operation. Do not use the product in places prohibited by laws or regulations to avoid accident.
 - 6.Do not disassemble or repair the product by yourself to avoid injury. If you have any questions or require any services, please contact our local dealer.