

# TAKSTAR® 得胜

## TS-SL1系列

TS-SL1 Series

### 专业级数字音频UHF无线系统

Professional Digital Audio UHF Wireless System



数字音频  
Digital Audio



优秀相偏  
Excellent Phase  
Response



自动配对  
Automatic Pairing



信号稳定  
Stable Signal



超低时延  
Ultra-Low Latency



激光指向  
Laser Pointing



超远距离  
Extended Range



超长续航  
Long Runtime



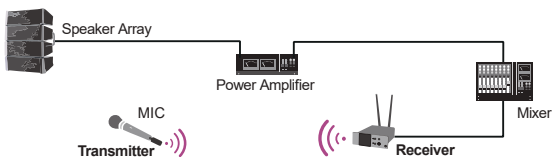
使用手册 | User Manual

## 系统特性

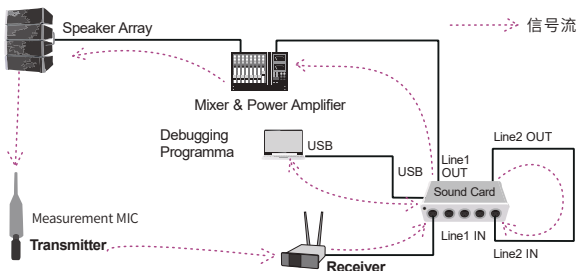
1. 20-20KHz全声域范围内, 频率响应衰减<3dB, 相位响应特性稳定;
2. 时延4.17ms, 舞美演播级别;
3. 普通无线环境下, 最大传输距离可达120M, 无断频;
4. 支持24V, 48V幻象电源, 续航能力>5h (48V幻象供电);
5. 自带陀螺仪、激光指向、自动配对等功能, 方便使用;
6. 增强底噪控制技术, 音质优异。
7. 宽频带, 集成500Mhz、600Mhz双频段。
8. 过压保护功能, 可防止调音台开启时48V电压烧毁接收机。

## 拓扑逻辑

### 音频转发场景

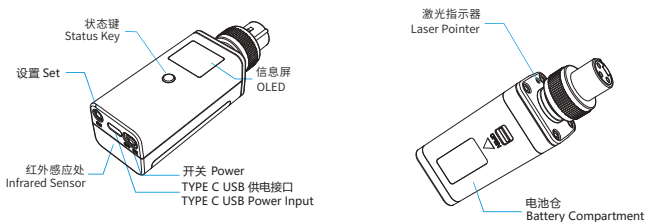


### 声场测试场景



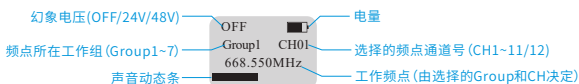
## TS-SL1T 直插式发射机

## 产品外观

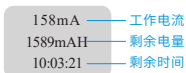


## 操作说明

### 1. 默认主界面

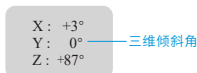


## 2. 状态查询界面



短按面板按键: 电池电量

(单电池使用时, 电量预测存在偏差)



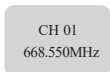
长按面板按键: MIC倾斜角

## 3. 设置界面

短按底部SET键按以下次序循环, 短按面板按键修改参数。



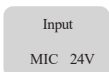
工作组设置



发射通道设置



频点设置 (仅Group7出现)



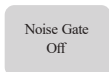
幻象电源设置



增益设置



发射强度设置



噪音门限设置



版本信息

## 4. 自动配对使用方法

发射机与接收机长按设置键即可进入配对模式; 将接收机的红外发射器对准发射机的红外接收器, 即可完成配对。

一旦启动红外对频功能, 接收机将进行扫描, 自动跳转至本组最干净的频点, 再与发射机完成配对。如需设定指定频点, 必须手动完成。

## 5. 无线信道管理逻辑

本设备遵循“Group(组) - Channel(无线通道) - Frequency(频点)”逻辑。

**Group(组):** 系统内置7个无线通道组, 每个组包括12个无线通道。

**CH(无线通道):** 每个无线通道绑定一个无线频点, 同一Group下的无线频点为系统推荐频点, 可以有效规避“互调干扰”。

**Frequency(频点):** 只能通过选择不同CH进行更改(Group 7除外)。

**Group 7(第7组通道):** 本组频点可手工更改, 需人工规避“互调干扰”。

- 发射端、接收端需调设在相同Group(组)、相同CH(无线通道)下, 才可工作。

## 6. 操作说明

- 开机: 底部拨码开关, 设备启动, 开机后将停留在首界面。

- 设置: 主界面按下“设置键”, 按次序可切换, 按“状态键”修改设置。

1. 组别设置, Set Group;
2. 通道设置, Set Channel;
3. 频率设置, Set Frequency: 只有第7组支持自定义频率;
4. 设置幻象电源, Input : OFF / 24V / 48V;
5. 设置增益, Set Gain;
6. 设置发射功率, Set RF Power : High / Middle / Low;
7. 设置噪音门限, Set Noise Gate: 能改善底噪过滤, OFF / ON。

- 如多组设备同时工作, 各组间必须设置不同组别及频点, 并且必须避免设置为互调干扰频点, 才可正常工作, 否则将出现干扰(参考互调干扰)。

## 常见问题

1. 如果连接电容话筒无信号输出, 请检查是否选择了幻象电源。
2. 当使用性能不佳充电锂电池时, 其降压电路会干扰接收机的性能。
3. 多套设备同时使用时, 如频点设置不当, 容易由于互调干扰造成性能下降。
4. 某些品牌MIC因信号屏蔽不佳可能造成干扰, 可启用卡农延长管解决。
5. 因为动圈话筒比电容话筒能量低! 如接动圈话筒, 必须加发射增益(建议+9dB); 如果仅增加调音台增益, 会误认为底噪手雷大!

## 性能参数

通信模式	UHF段无线电数字通信
调制方式	Pi/4 DQPSK
传输频段	510~590MHz, 668~ 698MHz (根据地区不同有所差别)
射频输出	<18dBm
传输距离	60~120米 (与信号的吸收、反射、干扰和选择的性能选项相关)
频响衰减	<2dB (20Hz~20KHz)
信噪比 S/N	>100dB
失真度 T.H.D	<0.5% (@1KHz)
时延	4.17ms
天线	集成式单波段螺旋型 (内置)
续航	48V幻象电源时>5h; 24V幻象电源时>6.5h (如带负载后, 电流>300mA时, 会有偏差)
供电	14500锂电池(3.7V) *2
电流	开启48V幻象电源, 工作电流220mA
重量 / 尺寸	96g, 无电池 / 94mm*64mm*21mm

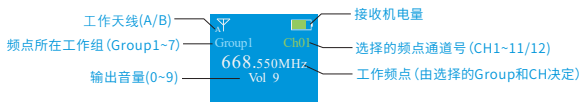
## TS-SL1R 机架式接收机

### 产品外观



### 操作说明

#### 1. 无链接主界面



#### 2. 有无线链接主界面



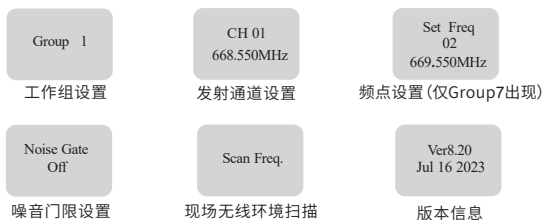
#### 3. 自动配对使用方法

发射机与接收机长按设置键即可进入配对模式; 将接收机的红外发射器对准发射机的红外接收器, 即可完成配对。

一旦启动红外对频功能, 接收机将进行扫描, 自动跳转至本组最干净的频点, 再与发射机完成配对。如需设定指定频点, 必须手动完成。

## 4. 设置界面

短按底部SET键按以下次序循环，短按面板按键修改参数。



## 5. 无线信道管理逻辑

本设备遵循“Group(组) - Channel(无线通道) - Frequency(频点)”逻辑。

**Group(组):**系统内置7个无线通道组,每个组包括12个无线通道。

**CH(通道):**每个无线通道绑定一个无线频点,同一Group下的无线频点为系统推荐频点,可以有效规避“互调干扰”。

**Frequency(频点):**只能通过选择不同CH进行更改(Group 7除外)。

**Group 7(第7组通道):**本组频点可手工更改,需人工规避“互调干扰”。

- 发射端、接收端需调设在相同Group(组)、相同CH(无线通道)下,才可工作。

## 6. 操作说明

- 开机:底部拨码开关,设备启动,开机后将停留在首页面。

- 设置:主界面按下“设置键”,按次序可切换,按“状态键”修改设置。

1. 组别设置, Set Group;

2. 通道设置, Set Channel;

3. 频率设置, Set Frequency:只有第7组支持自定义频率;

4. 设置噪音门限, Set Noise Gate:能改善底噪过滤, OFF / ON。

**5. 现场无线环境扫描, Scan Freq:**扫描本Group下所有频点的信号强度。显示“CH1 -78dB”,即CH1通道信号强度-78dB。该数值越低,说明干扰越少,适合使用。例如:-78dB好于-68dB。如大于-50dB,建议不要使用该频点。

- 如多组设备同时工作,各组间必须设置不同组别及频点,并且必须避免设置为互调干扰频点,才可正常工作,否则将出现干扰(参考互调干扰)。

- 调音台如果处于幻象电压工作状态时,直接插入接收机会导致烧毁设备。

## 性能参数

通信模式	UHF段无线电数字通信
调制方式	Pi/4 DQPSK
传输频段	510~590Mhz, 668~ 698MHz (根据地区不同有所差别)
传输距离	120米(与信号的吸收、反射、干扰和选择的性能选项相关)
频响衰减	<3dB (20Hz~20KHz)
信噪比 S/N	>100dB
失真度 T.H.D	<0.5% (@1KHz)
时延	4.17ms
天线	胶棒天线(外置, BNC接口)
续航	>8h(支持工作状态中充电)
供电	内置18650锂电池(3.7V, 3000mAH), USB-C充电
重量 / 尺寸	330g / 35mm*100mm*142mm

## 常见问题

1. 如果连接电容话筒无信号输出, 请检查是否选择了幻象电源。
2. 当使用性能不佳充电锂电池时, 其降压电路会干扰接收机的性能。
3. 多套设备同时使用时, 如频点设置不当, 容易由于互调干扰造成性能下降。

## 安全警告

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的人身伤害或财产损失, 使用本产品前, 请仔细阅读并遵守以下事项:

1. 使用产品时请确认所连设备与本产品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;
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, 然后将产品送售后服务网点检修;
3. 消费者若使用电源适配器供电, 则应购买配套使用获得CCC认证并满足标准要求的电源适配器;
4. 本产品及配件都应放置在室内干燥通风处, 请勿长期存放在潮湿、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;
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产品, 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售后服务网点跟进处理。

### 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

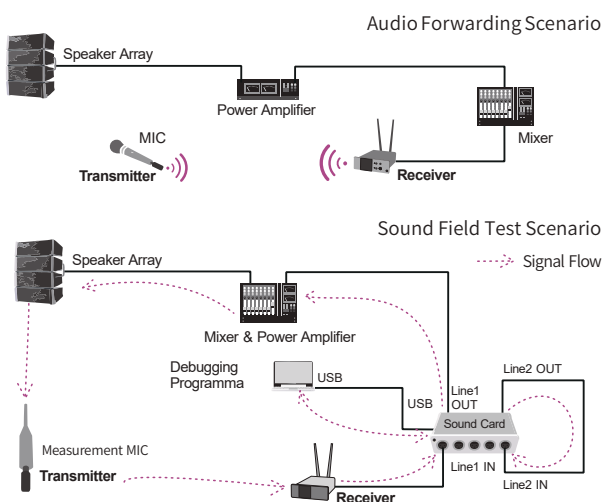
维修记录栏 (由维修员填写)	维修员签名	日期

◆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富康一路2号

## System Features

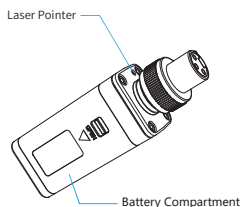
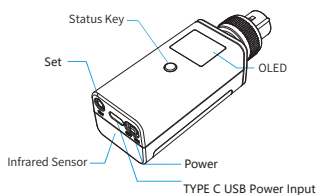
- Wide Frequency Response: 20Hz - 20kHz, with less than 3dB attenuation and stable phase response.
- Low Latency: 4.17ms delay, suitable for professional broadcasting.
- Long Transmission Range: Up to 120 meters in typical wireless environments, with no dropouts.
- Phantom Power Support: Compatible with 24V and 48V phantom power, with over 5 hours of battery life under 48V load.
- User-Friendly Features: Built-in gyroscope, laser pointer, and automatic pairing for easy operation.
- Enhanced Noise Control: Superior sound quality with advanced noise reduction technology.
- Dual Frequency Bands: Integrated 500MHz and 600MHz frequency bands.
- Overvoltage Protection: Prevents damage to receiver from 48V voltage spikes when mixer is powered on.

## Topology



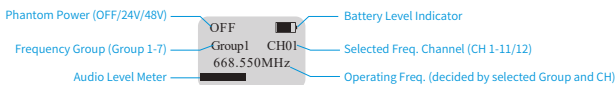
## TS-SL1T Plug-in Transmitter

## Product Appearance

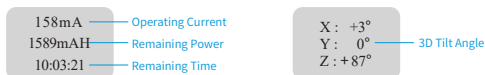


# Operation Instructions

## 1. Default Main Interface



## 2. Status Query Interface



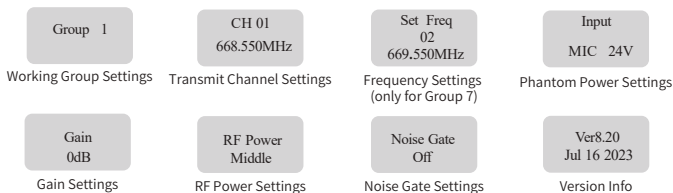
Short Press Status Key

Long Press Status Key

(Battery prediction may vary when using a single battery)

## 3. Settings Interface

Short press the bottom SET button to cycle through the following options, and short press the status key to modify parameters:



## 4. Automatic Pairing Instructions

To enter pairing mode, long press the SET button on both the transmitter and receiver. Align the receiver's infrared emitter with the transmitter's infrared receiver to complete the pairing.

Once the infrared sync function is activated, the receiver will scan and automatically switch to the cleanest frequency within the group before pairing with the transmitter. To set a specific frequency, manual configuration is required.

## 5. Wireless Channel Management Logic

This device follows the "Group - Channel - Frequency" logic.

**Group:** The system includes 7 built-in wireless channel groups, each containing 12 wireless channels.

**Channel (CH):** Each wireless channel is linked to a specific wireless frequency.

Frequencies within the same group are recommended by the system to effectively avoid intermodulation interference.

**Frequency:** Frequencies can only be changed by selecting different channels (except for Group 7).

**Group 7:** The frequencies in this group can be manually changed, requiring users to avoid intermodulation interference manually.

- The transmitter and receiver must be set to the same Group and Channel to operate correctly.

## 6. Operation Instructions

- **Power On:** Use the bottom toggle switch to turn on the device. It will display the main interface upon startup.

- **Settings:** Press the SET button while on the main interface to cycle through options. Press the STATUS key to modify settings.

- 1) Set Group
- 2) Set Channel
- 3) Set Frequency: Only Group 7 supports custom frequency settings
- 4) Set Phantom Power: Input options are OFF, 24V, or 48V
- 5) Set Gain



6) Set RF Power: High, Middle, or Low

7) Set Noise Gate: Improves noise filtering, options are OFF or ON

- When operating multiple sets of devices simultaneously, ensure each system is set to different groups and frequencies while avoiding intermodulation interference frequencies for normal operation; otherwise, interference may occur (refer to intermodulation interference).

## Frequently Asked Questions

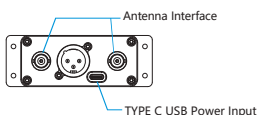
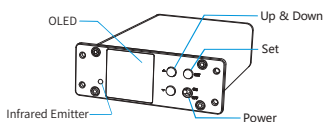
1. If there is no signal output when connecting a condenser mic, please check if the phantom power is enabled.
2. Using low-quality rechargeable lithium-ion batteries may interfere with the receiver's performance due to their voltage drop circuit.
3. When multiple sets of devices are used simultaneously, improper frequency settings can lead to performance degradation due to intermodulation interference.
4. Some brands of mics may experience interference due to poor signal shielding; using a XLR extension cable can help resolve this issue.
5. Dynamic mics have lower output levels compared to condenser mics. When using a dynamic mic, it is essential to increase the transmission gain on the transmitter (recommended +9 dB). Simply boosting the gain on the mixer side may lead to increased noise.

## Parameters

Communication Mode	UHF band digital wireless communication
Modulation Method	Pi/4 DQPSK
Frequency Band	510-590 MHz, 668-698 MHz (varies by region)
RF Output	<18 dBm
Transmission Distance	60-120 meters (dependent on signal absorption, reflection, interference, and selected performance options)
Freq. Response Attenuation	<2 dB (20 Hz - 20 kHz)
S/N Ratio	>100 dB
T.H.D	<0.5% (@1 kHz)
Latency	4.17 ms
Antenna	Integrated single-band helical (built-in)
Battery Life	>5h @ 48V phantom; >6.5h @ 24V phantom (may vary if exceeds 300 mA under load)
Power Supply	Two 14500 lithium batteries (3.7V)
Operating Current	220 mA when 48V phantom power is enabled
Weight / Size	96 g (without batteries) / 94mm*64mm*21mm

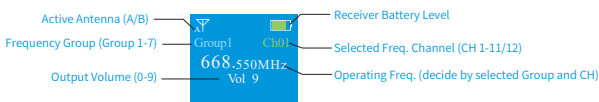
## TS-SL1R Rackmount Receiver

### Product Appearance

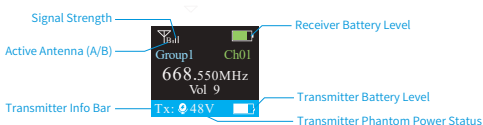


# Operation Instructions

## 1. Main Interface (not connected)



## 2. Main Interface (connected)



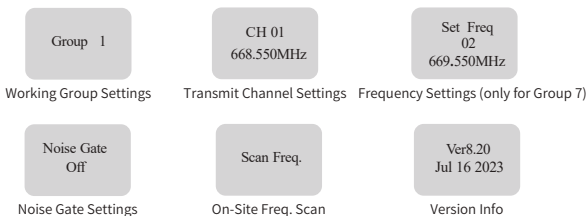
## 3. Automatic Pairing Instructions

Long press the SET button on both the transmitter and receiver to enter pairing mode. Align the receiver's infrared emitter with the transmitter's infrared receiver to complete the pairing.

Once the infrared sync function is activated, the receiver will scan and automatically switch to the cleanest frequency within the group before pairing with the transmitter. To set a specific frequency, manual configuration is required.

## 4. Settings Interface

Short press the bottom SET button to cycle through the following options, and short press the status key to modify parameters:



## 5. Wireless Channel Management Logic

This device follows the "Group - Channel - Frequency" logic.

**Group:** The system includes 7 built-in wireless channel groups, each containing 12 wireless channels.

**Channel (CH):** Each wireless channel is linked to a specific wireless frequency.

Frequencies within the same group are recommended by the system to effectively avoid intermodulation interference.

**Frequency:** Frequencies can only be changed by selecting different channels (except for Group 7).

**Group 7:** The frequencies in this group can be manually changed, requiring users to manually avoid intermodulation interference.

- The transmitter and receiver must be set to the same Group and Channel to operate correctly.

## 6. Operation Instructions

- **Power On:** Use the bottom toggle switch to turn on the device. It will display the main interface upon startup.

- **Settings:** Press the SET button on the main interface to cycle through the options. Press the STATUS key to modify settings.

1) Set Group

2) Set Channel

3) Set Frequency: Custom frequency settings are only supported in Group 7

4) Set Noise Gate: Improves noise filtering, options are OFF or ON

5) Scan Frequency: Scans the signal strength of all frequencies within the selected group. For example, "CH1 -78dB" indicates a signal strength of -78 dB for Channel 1. Lower values indicate less interference and are more suitable for use (e.g., -78 dB is better than -68 dB). If the value is higher than -50 dB, it is advisable not to use that frequency.

- When operating multiple sets of devices simultaneously, ensure each system is set to different groups and frequencies, avoiding intermodulation interference frequencies for normal operation; otherwise, interference may occur (refer to intermodulation interference).

- If the mixer channel is powered with phantom voltage, directly connecting it to the receiver may damage the device.

## Parameters

communication mode	UHF band digital wireless communication
Modulation Method	Pi/4 DQPSK
Frequency Band	510-590 MHz, 668-698 MHz (varies by region)
Transmission Distance	Up to 120 meters (dependent on signal absorption, reflection, interference, and selected performance options)
Freq. Response Attenuation	<3 dB (20 Hz - 20 kHz)
S/N Ratio	>100 dB
T.H.D	<0.5% (@1 kHz)
Latency	4.17 ms
Antenna	External rubber duck antenna (BNC connector)
Battery Life	>8h (supports charging during operation)
Power Supply	Built-in 18650 lithium battery (3.7V, 3000 mAh), USB-C charging
Weight / Size	330 g / 35mm*100mm*142 mm

## Frequently Asked Questions

1. If there is no signal output when connecting a condenser mic, please check if the phantom power is enabled.
2. Using low-quality rechargeable lithium-ion batteries may interfere with the receiver's performance due to their voltage drop circuit.
3. When multiple sets of devices are used simultaneously, improper frequency settings can lead to performance degradation due to intermodulation interference.

## Safety Instructions

To avoid electric shock, overheat, 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.
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. Please use the provided power adapter to charge this product. If you need to use a different adapter, make sure to purchase one that is CCC certified and meets the required standards.
4. 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.
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.



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