TAKSTAR® 得胜

DG-U100 | 无线会议麦克风系统

Wireless Conference Microphone System

使用说明

User's Manual

■ 前言

尊敬的用户：

感谢您选购得胜DG-U100无线会议麦克风系统，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

主机特点

- 信号覆盖范围内支持83个会议单元连接使用,同时发言人数1-4人可选
- 连接摄像头可实现发言实时视像追踪功能，可同时控制7台摄像头
- 多种云台球机控制协议，兼容性强，支持Sony Visca、 Pelco-P、Pelco-D协议
- 局域网智能控制软件，实现界面一体化管理，布线简单快捷
- 红外线对频技术，大大提高会议单元设定的方便性
- 每个通道内置15段均衡器，可以根据需求调整参数
- 可以远程控制单元增益，适合不同发言人士需求
- SUBG频段数据调度技术，数字无线处理音频信号和控制信号，距离远，抗干扰性强
- 智能电源管理系统，主机关闭电源后，各单元将自动关机，降低电池消耗
- 远程换频功能，实现远距离单元和主机控机频率同步换频
- 支持“先进先出模式”、“无代表模式”2种发言模拟设置
- XLR、TRS输出、 TRS隔离输出，可以适用不同的音响设备连接
- 2U机箱设计，可安装在19英寸标准机架

单元特点

- 12864点阵屏，参数显示明了直观，方便用户实时了解设备工作状态
- 会议单元优先级别设定由红外线对频完成，无需区分主席、来宾和代表单元，可以根据现场要求任意设定；
- 电容式高保真咪头设计，拾音距离远，灵敏度高，失真小，声音更清晰
- 主席单元具有优先功能，不受限制功能的限制，可切断代表发言
- 来宾单元可以独立发言，不受主席打断或者先进先出切断
- 代表单元，单元受控于主席单元，可以实现会场控制
- 代表单元显示发言时间，代表可根据需求参考时间，调整发言速度
- 内置发射天线，稳定性高，抗干扰能力强，美观大方
- 单元增益可调节，增益由主机修改，适合不同发言人士需求

■ 适用范围

适用于会议，教室，多功能厅等场景

■ 技术参数

主机参数

- 电源：DC12/1A
- 频率：通话频率：640-692MHz，调度频率：315-316MHz
- 接收灵敏度：-105dBm
- 信噪比：>80dB
- 失真度(T.H.D):<0.5%dB@1KHz
- 工作有效距离：70米（在理想环境下）
- 会话信道数：4X83
- 网络通讯协议：UDP
- 摄像头控制方式：RS-485，波特率9600
- 功耗：6W
- 产品尺寸：430×100×220mm
- 净重：3.5Kg

单元参数

- 电源供应：DC 3V，AA 1.5 V * 2
- 发射功率（天线端口）：≥10mW
- 拾音咪头：电容式、单一指向
- 持续使用时长：8小时（视电池容量大小而有所差异）

注：以上数据由得胜实验室测试得到，并拥有最终解释权！

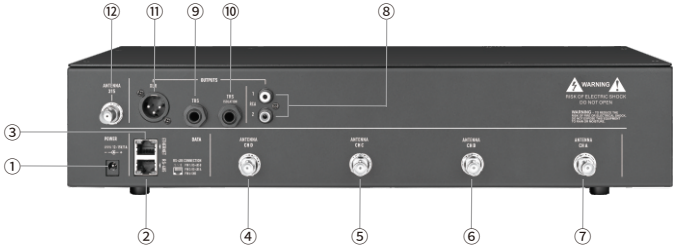
■ 功能示意

主控机示意图：

正面板

① 通道1 - 4 调制度显示
② 液晶显示器
③ 通讯状态显示
④ 编辑按钮：旋转移动光标或编辑参数，按下选中或编辑参数
⑤ 电源开关按键
⑥ 红外对频窗口

背面板



① 电源输入插座
② 高速云球RS485接口
③ 网络RJ45插座
④ 通道4天线插座
⑤ 通道3天线插座
⑥ 通道2天线插座
⑦ 通道1天线插座
⑧ RCA输出插座
⑨ TRS隔离输出
⑩ TRS非隔离输出
⑪ XLR平衡输出
⑫ 315天线插座

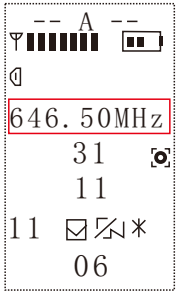
注：通道1 - 4天线频率为640~690MHz

会议单元示意图

① 开机、关机、通话按键　　③ 打断功能按键
② 红外线接收窗口　　④ 液晶显示器

■ 使用说明

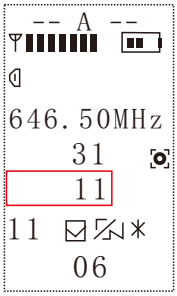
1.通道频率调节：
旋转“CURSOR”旋钮使光标落在下图①红色框处，按下旋钮并旋转旋钮即可对频率进行调节，再次按动旋钮即可设定所需的频率；



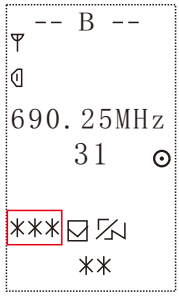
图①

2.通道优先级选择以及设定：

旋转“CURSOR”旋钮，光标落在图②红色框处按动旋钮即可对优先级进行选定，“主席”、“来宾”、“代表”三种优先级可选，主席（11-14）和来宾（01-04）编号会自动生成，当优先级设定为代表时，需要手动设置代表编号，此时需要将光标落在图③并按下旋钮，旋转旋钮即可设定代表单元编号（21-100可选）如图④所示：



图②

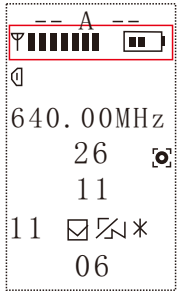


图③

图④

3.单元对频

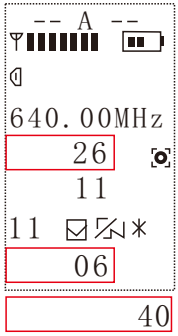
设定好所需要的的频率和设定好优先级后即可进行对频操作，此时长按单元的“通话”按键使单元处于开机状态，并使单元的红外窗口对准主机的红外窗口，旋转主机旋钮把光标移动到“对频”处按下主机旋钮，此时主机红外接收窗口红灯闪烁即可自动对频，当红灯停止闪烁则对频完成，此时该通道界面顶部会显示信号强度条和单元电池电量信息如图⑤：



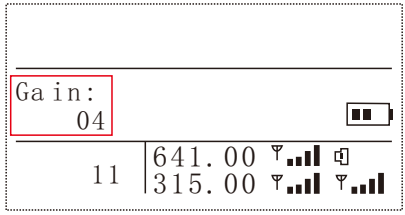
图⑤

4.通道输入/输出音量，单元增益调节

当通道的对频完成后，可根据实际需要的声音的大小来调节输入/输出音量以及单元话筒增益，旋转“CURSOR”旋钮使光标落在图⑥红色框处即可对输入/输出音量和单元增益进行调节，操作方法同频率调节相同，单元增益调节成功时单元显示屏会短暂出现红框中信息，如下图⑦所示：



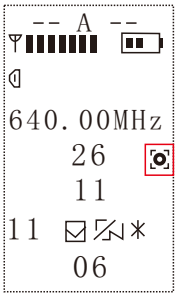
图⑥



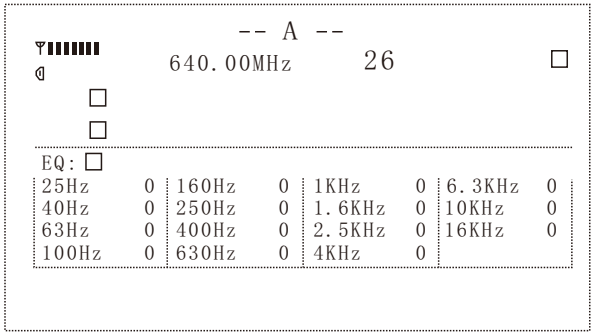
图⑦

5.通道EQ、效果、啸叫抑制设定

上述操作完成后，可根据实际需要设定相应的EQ，效果，啸叫抑制等；旋转旋钮使光标落在图⑧红框处，按下旋钮进入设定界面:



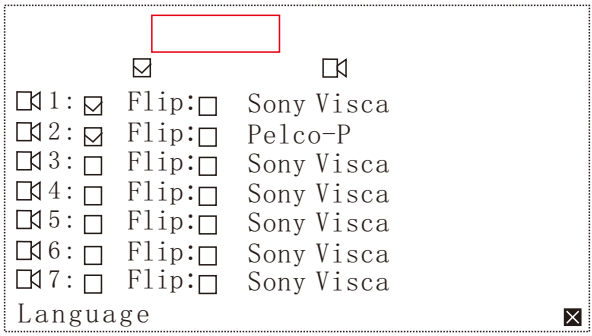
图⑧



注：按下旋转旋钮勾选即可开启相应的功能

6.会议模式

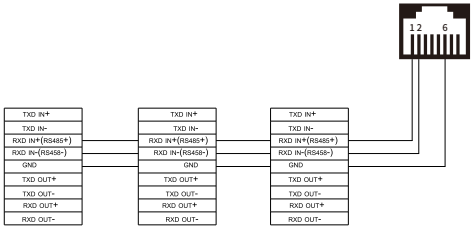
旋转旋钮进入会议模式设定界面，将光标落在图⑨红色框位置处，按动旋钮即可对会议模式进行切换选择，支持“先进先出”、“无代表”两种模式可选；



图⑨

7. 摄像球连接

7.1本会议主机支持Sony Visca、 Pelco-P、 Pelco–D摄像球控制协议，下图为原装SONY D70脚位连接图：



VISCA RS-422

Pin No.	Function
1	TXD IN+
2	TXD IN-
3	RXD IN+(RS485+)
4	RXD IN-(RS485+)
5	GND
6	TXD OUT+
7	TXD OUT-
8	RXD OUT+
9	RXD OUT-

接线图

Pin No.	Function
1	TXD IN+
2	TXD IN-
3	RXD IN+(RS485+)
4	RXD IN-(RS485+)
5	GND

（高清）

注意

·RS 422和RS 232不能同时使用

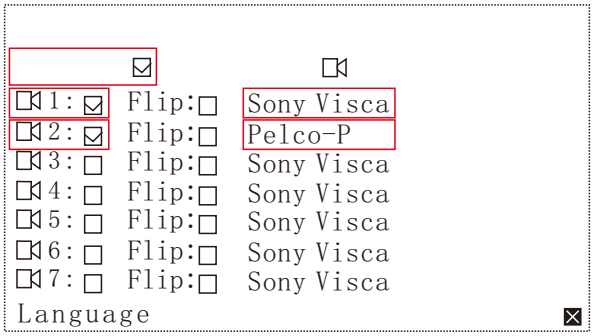
摄像头控制示意图

以上连接图仅供参考，实际情况请根据所使用摄像球的脚针定义。

7.2 摄像跟踪功能设置说明

主机和摄像头连线完毕后，将摄像头视频输出到显示器上，通过遥控进入摄像头的设置界面对摄像头的ID和波特率进行设置，并可以通过设置界面查看该摄像头使用的控制协议，其中波特率需设置为9600，ID号是根据实际需要对摄像头进行的编号（主机最多支持7个摄像头，摄像头ID可选1-7），其他参数默认。

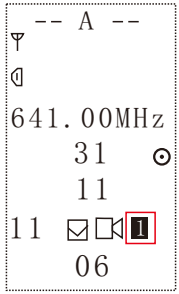
摄像头参数设置完毕后，旋转主机旋钮进入摄像跟踪界面，如下图所示：



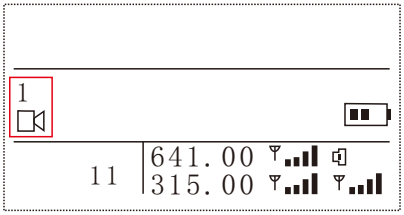
将光标移动到摄像跟踪后的小方框位置，按下旋钮勾选启用摄像跟踪功能；根据设置好的摄像头ID编号用同样的操作方法勾选主机相应编号的摄像头，并更改摄像头对应的控控制协议（光标移动到控制协议位置，按下旋钮进行协议切换）；当摄像头画面翻转的情况下需要勾选“Flip”功能。

上述步骤完成后就可以进行摄像头绑定和定位操作：

首先根据所需采集发言显示屏画面调整好摄像头的角度（通过摄像头遥控进行控制），旋转主机旋钮使光标移动到下图红框位置处：



按下并旋转旋钮选择实际使用需要的摄像头ID编号，同时短按两下发送指令给摄像头，此时ID号后面会短暂出现一个向上的箭头，同时摄像头信号灯会闪烁说明摄像头绑定并定位成功，此时单元界面也会出现所对应的摄像头编号，如下图所示：



注意事项：

1) 检查主机与摄像头的连线序是否正确；

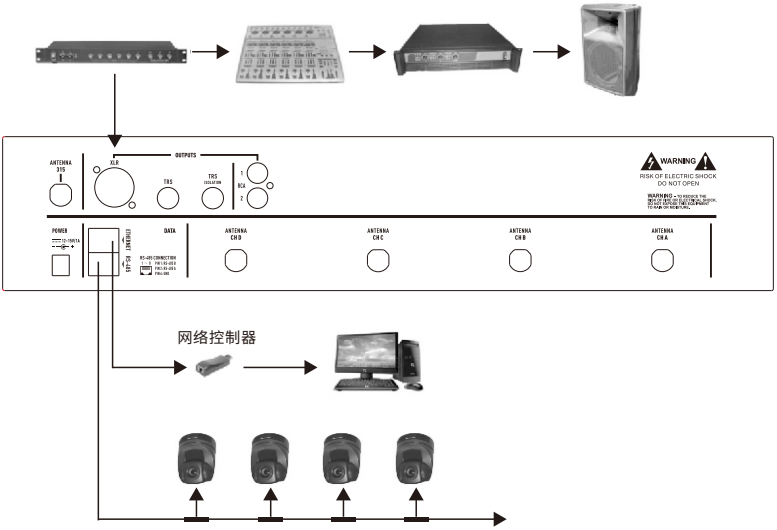
2) 摄像头的ID和波特率是否设置好；

3) 主机摄像跟踪是否打开，是否勾选相应ID号以及正确选择所使用的摄像头控制协议；

4) 主机各通道对应单元的ID是否设置正确并同步指令到摄像头和单元上；

5) 代表单元上述操作成后建议关机再对下一个代表单元进行操作。

8.系统连接参考图



■ 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，使用本产品前，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设备音量大小，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，然后将产品送经销商检修；
3. 本产品及附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，避免损坏其功能；
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

■ 环保说明

产品中有毒有害物质或元素的名称及含量标识表

部件名称	有毒有害物质或元素									
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)	邻苯二甲酸二正丁酯 (DBP)	邻苯二甲酸二异丁酯 (DIBP)	邻苯二甲酸丁基苄酯 (BBP)	邻苯二甲酸二(2-乙基)己酯 (DEHP)
塑料部件	○	○	○	○	○	○	○	○	○	○
金属部件	×	○	○	○	○	○	○	○	○	○
电路板组件	×	○	○	○	○	○	○	○	○	○
线缆	×	○	○	○	○	○	○	○	○	○

注1：○：表示该有害物质在该部件所有均质材料中的含量均不超出电器电子产品有害物质限制使用国家标准要求。
×：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电器电子产品有害物质限制使用国家标准要求。
注2：以上未列出的部件，表明其有害物质含量均不超出电器电子产品有害物质限制使用国家标准要求。

此标志为产品的环保使用期限标志，
且此标保使用期限只适用于产品正常工作的温度和湿度等条件。

DG-U100 Wireless Conference Microphone System

■ Preface

Dear Customer,

Thank you for purchasing Takstar DG-U100 Wireless Conference Microphone System. In order to better understand and use the product, please read this manual carefully.

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

■ Features

Features of Control Unit

- Connects up to 83 mic units within signal coverage, allowing simultaneous speech from 1~4 persons
- Real-time tracking of speakers by connecting to cameras; controls up to 7 cameras at the same time
- Supports multiple PTZ camera control protocols such as Sony Visca, Pelco-P and Pelco-D
- Smart LAN control software for managing all units in one integrated interface, easy to deploy
- Infrared sync for greater ease on setting up conference
- Built-in 15-band EQ for each channel, adjustable as required
- Remote gain control on discussion units, catering to different speaker requirements
- SUBG band data scheduling technology, wireless digital audio/control signal processing, farther transmission and better anti-interference
- Intelligent power management lowers battery consumption by auto shutdown of discussion units when control unit is powered off
- Remote frequency changer allows synchronizing frequency changes remotely between control unit and discussion units
- Supports two discussion modes: FIFO (First-in-First-out) or No-Delegate mode
- XLR/TRS/TRS-Isolated outputs for connection with various audio equipment
- 2U rack unit size installs into a standard 19" rack mount

Features of Discussion Units

- 12864 pixel matrix screen, with clear and intuitive indication of device status
- Discussion unit priority is set freely via IR Sync; no more physical distinction among chairman/guest/delegate units
- Condenser capsule offers high fidelity, long pickup distance, high sensitivity, low distortion and clear sound
- Chairman units are prioritized, unrestricted and able to interrupt speech of delegate units
- Guest units can speak independently, uninterrupted by chairman units or FIFO rules
- Delegate units are controlled by chairman units for conference management
- Delegate units display the speaking duration which serves as reference for speech speed adjustment
- Built-in antennas, elegant in looks, also provide strong stability and anti-interference
- Adjustable gain for each discussion unit, configurable on control unit, adaptable to various speakers

DG-U100 Wireless Conference Microphone System

■ Applications

Suitable for meetings, classrooms, multi-function halls

■ Specifications

Control Unit (CU) Parameters

- Power Supply: DC 12V/1A
- Frequency: call frequency: 640-692MHz, scheduling frequency: 315-316MHz
- Receiving Sensitivity: -105dBm
- S/N Ratio: > 80dB
- T.H.D: < 0.5%dB @ 1KHz
- Effective Range: 70m (in open area)
- Number of Discussion Channels: 4 X 83
- Network Communication Protocol: UDP
- Camera Control Mode: RS-485, 9600 baud
- Power Consumption: 6W
- Product Dimensions: 430×100×220mm
- Net Weight: 3.5Kg

Discussion Unit Parameters

- Power Supply: DC 3V, AA 1.5V * 2
- Transmit Power (antenna port): ⩾10mW
- Mic Capsule: condenser, unidirectional
- Continuous Use Time: 8hrs (subject to battery capacity)

Note: The above data is measured by Takstar laboratory, and Takstar has the final interpretation right!

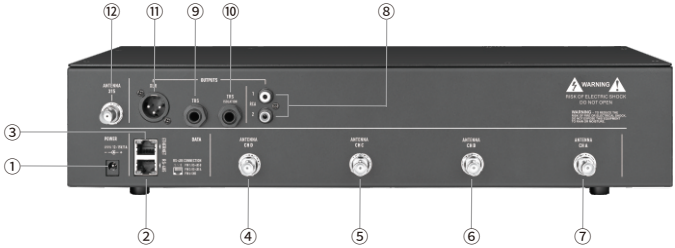
■ Function Descriptions

Control Unit Diagram

Front Panel

①Channel 1~4 scheduling parameters
② LCD display
③ Communication status
④ Edit button: rotate to move the cursor or edit parameters, push to select or edit parameters
⑤ Power button
⑥ Infrared sync window

Back Panel



①Power input socket
② RS485 interface for high-speed PTZ camera
③ Network RJ45 socket
④ Channel 4 antenna socket
⑤ Channel 3 antenna socket
⑥ Channel 2 antenna socket
⑦ Channel 1 antenna socket
⑧ RCA output socket
⑨TRS isolated output
⑩ TRS non-isolated output
⑪ XLR balanced output
⑫ 315 antenna socket

Note: Antenna frequency for Channel 1~4 is 640~690MHz

Discussion Unit Diagram

① Power-on/power-off/speak button
② Infrared receiving window
③ Interrupt function button
④ LCD display

■ Operation Instructions

1. Adjust Channel Frequency

Turn the CURSOR knob to move the cursor onto the box in below figure ①, press and rotate the knob to adjust the frequency, then press the knob again to set the desired frequency.

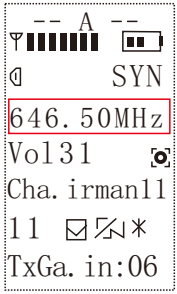


Figure ①

2. Select & Set Channel Priority

Rotate the CURSOR knob to move the cursor onto the box in Figure ②, and press the knob to switch priority among "Chairman", "Guest", or "Delegate". For Chairman (11-14) and Guest (01-04) units, their IDs will be automatically generated; while for Delegate units, you need to manually set their IDs. This can be done by moving the cursor onto the box in Figure ③, press the knob, then rotate to set the Delegate ID (21-100 optional) as shown in Figure ④.

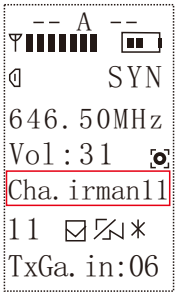


Figure ②

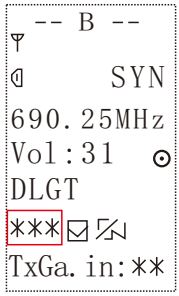


Figure ③

Figure ④

3. Sync Units

Set the required frequency and priority before syncing frequency. Press and hold the SPEAK button on the mic unit, and align the IR windows on both the mic unit and the CU; rotate the CURSOR knob on CU to select "SYN" , then press the knob to start automatic sync, in which case the CU IR window will flash red until the syncing is over. Once synced successfully, the CU screen will display the Signal Meter and Mic Battery Status, as shown in Figure ⑤:

Figure ⑤

4. Channel Input/Output Volume, Unit Gain Control

When the channel frequency pairing is complete, you can adjust the input/output volume and unit microphone gain to a desired level.

Rotate the CURSOR knob to move the cursor onto the boxes in Figure ⑥, and start adjusting the input/output volume or gain level respectively, following similar steps in Adjust Frequency. When the gain level is changed successfully, the gain level will briefly appear in the red box area on the mic unit screen, as shown in Figure ⑦.

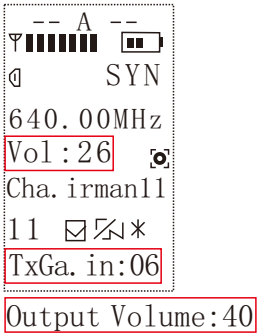


Figure ⑥

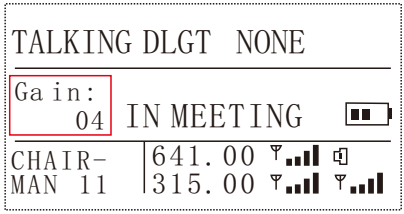
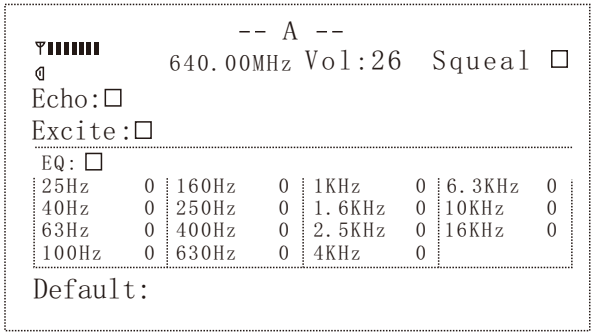


Figure ⑦

5. Channel EQ, Effects, Feedback Suppression

After the above steps, you can set the corresponding EQ, effect and feedback suppression according to actual needs. Rotate the knob so that the cursor falls on the box in Figure ⑧, press the knob to enter the setting interface:

Figure ⑧



Note: Press the rotary button to check and enable the corresponding function

6. Conference Mode

Rotate the knob to enter the conference mode settings, move the cursor to the box area in Figure ⑨, press the knob to switch the conference mode between "FIFO" or "No DLGT".

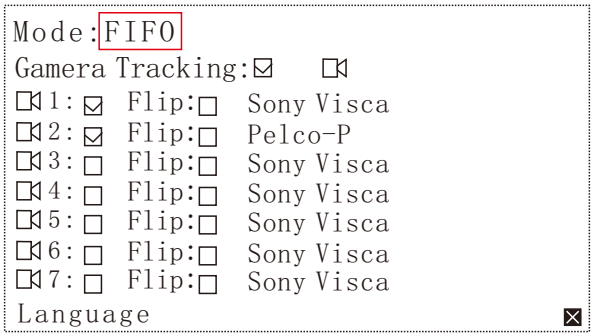
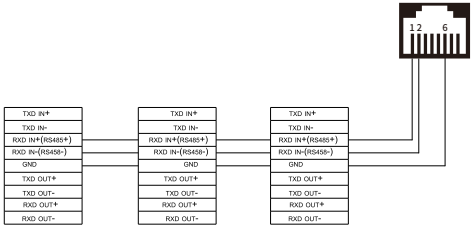


Figure ⑨

7. PTZ Camera Connection

7.1 The CU supports PTZ camera control protocols including Sony Visca, Pelco-P and Pelco-D. The following figure is the pin connection diagram for an original SONY D70 camera



VISCA RS-422 Wiring

Pin No.	Function
1	TXD IN+
2	TXD IN-
3	RXD IN+(RS485+)
4	RXD IN-(RS485+)
5	GND
6	TXD OUT+
7	TXD OUT-
8	RXD OUT+
9	RXD OUT-

Pin No.	Function
1	TXD IN+
2	TXD IN-
3	RXD IN+(RS485+)
4	RXD IN-(RS485+)
5	GND

(HD)

Note

RS 422 and RS 232 cannot be used at the same time

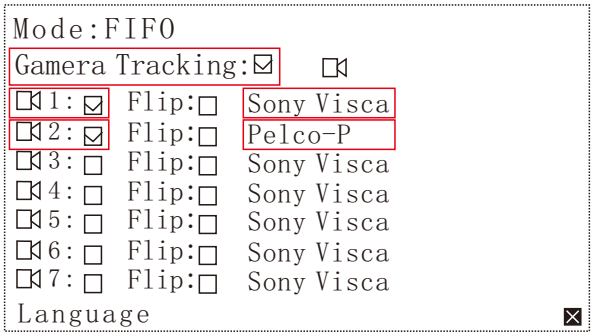
Camera Control Schematic

The above connection diagram is for reference only. Please see the pin definition of the PTZ camera used for actual application.

7.2 Camera Tracking Settings

After the CU and the camera are connected, output the camera video to a monitor, use a remote to enter the camera settings, configure Camera ID and Baud. You can also view the Camera Protocol in the settings. Set the Baud value to 9600, and ID to desired (supporting up to 7 cameras, optional ID 1~7), and leave other parameters unchanged.

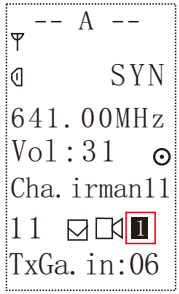
Once the camera parameters are set, rotate the CU CURSOR to enter camera tracking interface, as shown below:



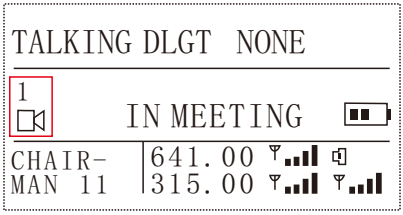
Move the cursor to the checkbox beside the camera icon, and press the CURSOR knob to check tracking function. Then based on the configuration, check the corresponding camera ID, and modify its respective Camera Protocol (by moving the cursor to the protocol, and press the knob to switch protocol). Check " Flip" to flip around the camera footage if necessary.

Next, proceed to binding and positioning the camera:

Adjust the camera angle based on your capturing footage on the monitor (via camera remote), rotate the CU knob to move the cursor to below framed area:



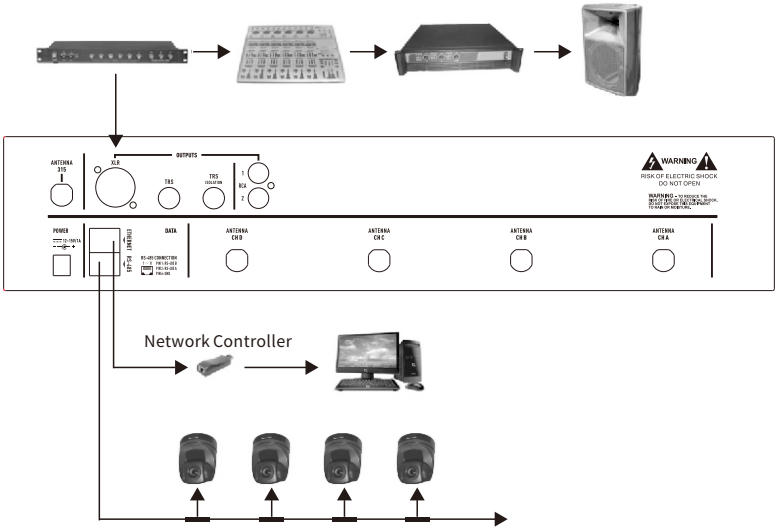
Press and rotate the knob to select the camera ID for use, then double-tap to issue the instruction to camera. There will be an upward arrow appearing briefly after issuing the ID, and the camera signal LED will flash to indicate successful binding and positioning. The mic unit screen will also show the linked camera ID, as shown below:



Cautions:

1) Check if the CU and the camera are wired correctly.
2) Check if the ID No. and Baud of the camera is set properly.
3) Whether the camera tracking function is enabled on the CU, and whether corresponding ID and Camera Protocol are selected.
4) Whether the ID on the discussion unit is set correctly and issued to the camera.
5) It' s suggested to turn off the configured delegate unit before setting up a new one.

8. System Wiring Diagram for Reference



■ 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 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.

Suitable only for altitudes below 2,000m

Suitable only for non-tropical climates

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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。
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