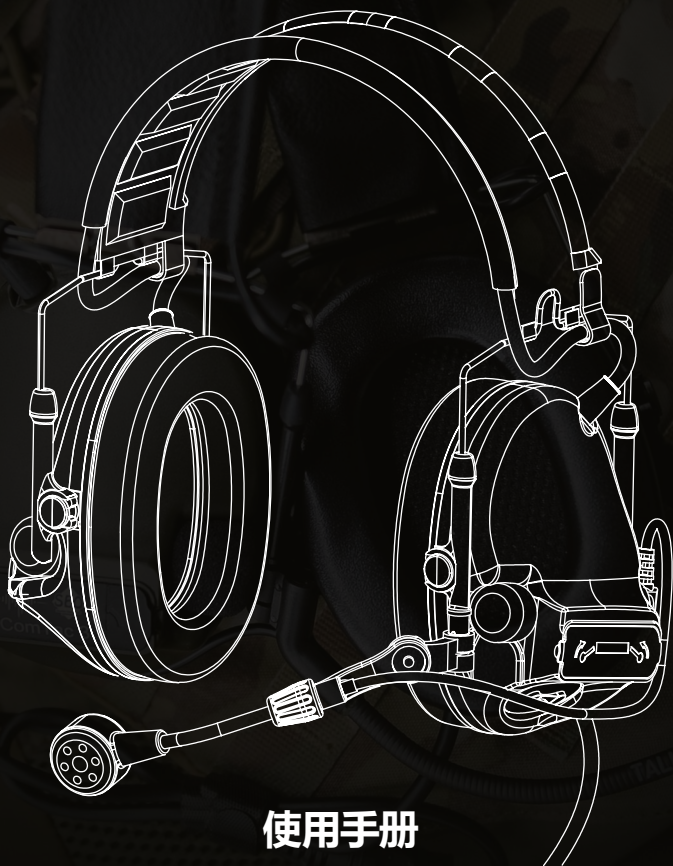


COMTAC-3 DSP

FCS TACTICAL COMMUNICATION HEADSETS

通信拾音降噪战术耳机



使用手册

USER'S MANUAL

FCS

产品简介/PRODUCT INTRODUCTION



FCS COMTAC3 DSP 拾音降噪战术耳机采用了全新的数字化降噪处理技术，在降噪触发响应和效果上提升显著。耳机采用了FCS自主研发的 TSFS（True Sound Field Situation）全景声真实环境声音处理技术。用户佩戴以后，能有效增强现场声音环境态势的听觉判断，如某些常见的声音特征，进行增强、强化或衰减处理（脚步、枪声、爆炸声），经过多方面检测和实战检验，能够让用户获得更敏锐更快速的战术响应。FCS COMTAC3 DSP耳机具有良好的兼容性，采用 NATO标准连接线，配合相应PTT即可实现不同电台的连接和通讯使用。

产品特点/FEATURES

DSP 数字降噪

采用全新的数字化降噪处理技术，降噪触发响应更快，降噪显著提升。



26dB降噪

NRR:26dB H:34dB M:28dB L:16dB



360°全景声辨位

通过FCS自主研发的 TSFS 全景真实环境声音处理技术，实现对方位的辨析与感知，能够自动分辨声场的细微声响并对特定声音进行自动调整和放大，提供更多细节用于战术判断。



自适应智能降噪模式

自适应智能降噪模式：根据空间环境的不同，智能识别场景自动选择降噪模式。在室内或室外环境自动消噪的同时不影响正常拾取环境音。



抗电磁干扰设计

在电路硬件上，深入考虑EMI、EMC的相关行业电磁兼容标准，可有效避免其他设备所产生的电磁干扰。



射击环境听觉保护技术

自适应隔离有害声压，有效保护听觉。
全自动电子声压保护临界点：约85dB。



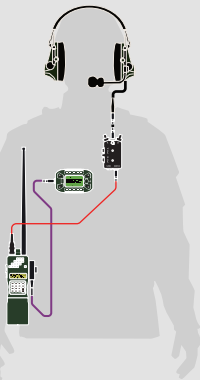
模块化头梁设计

采用模块化头梁设计，可以进行快拆选择相应头盔支架适配相应的战术头盔。



高续航

理论续航值达72小时。
耳机具备节能自动关机功能，在无操作的情况下4小时自动关机。



产品简介/PRODUCT INTRODUCTION



The FCS COMTAC3 DSP tactical headsets adopt a new digital noise reduction processing technology, which significantly improves the noise reduction trigger response and effect. The headset adopts the TSFS (True Sound Field Situation) panoramic sound real environment sound processing technology independently developed by FCS. After the user wears it, it can effectively enhance the auditory judgment of the on-site sound environment. For example, some common sound features can be enhanced, strengthened or attenuated (footsteps, gunshots, explosions). Users get sharper and faster tactical responses. FCS COMTAC3 DSP headsets have good compatibility, adopt NATO standard cable, and cooperate with corresponding PTT to realize the connection and communication of different radio

产品特点/FEATURES

DSP DIGITAL NOISE REDUCTION

·Using a new digital noise reduction processing technology, the noise reduction trigger response is faster, and the noise reduction is significantly improved.



26dB NOISE REDUCTION

NRR:26dB H:34dB M:28dB L:16dB



360° PANORAMIC SOUND POSITION RECOGNITION

·Through the TSFS panoramic real environment sound processing technology independently developed by FCS, it can realize the identification and perception of orientation, and can automatically distinguish the subtle sounds of the sound field and automatically adjust and amplify specific sounds, providing more details for tactical judgment.



ADAPTIVE INTELLIGENT NOISE REDUCTION MODE

·Adaptive intelligent noise reduction mode: According to the different space environment, intelligently recognize the scene and automatically select the noise reduction mode.

·It can automatically cancel noise in indoor or outdoor environment without affecting the normal pickup of ambient sound.



ANTI-ELECTROMAGNETIC INTERFERENCE DESIGN

·In terms of circuit hardware, in-depth consideration of the relevant industry electromagnetic compatibility standards of EMI and EMC can effectively avoid electromagnetic interference generated by other equipment.



SHOOTING ENVIRONMENT OPTIMIZATION

·Adaptive isolation of harmful sound pressure, effective protection of hearing.
·Automatic electronic sound pressure protection critical point: about 85dB.



MODULAR HEAD BEAM DESIGN.

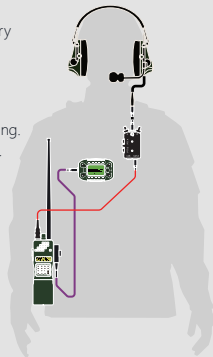
·With the modular head beam design, it can be quickly disassembled to select the corresponding helmet bracket to adapt to the corresponding tactical helmet.



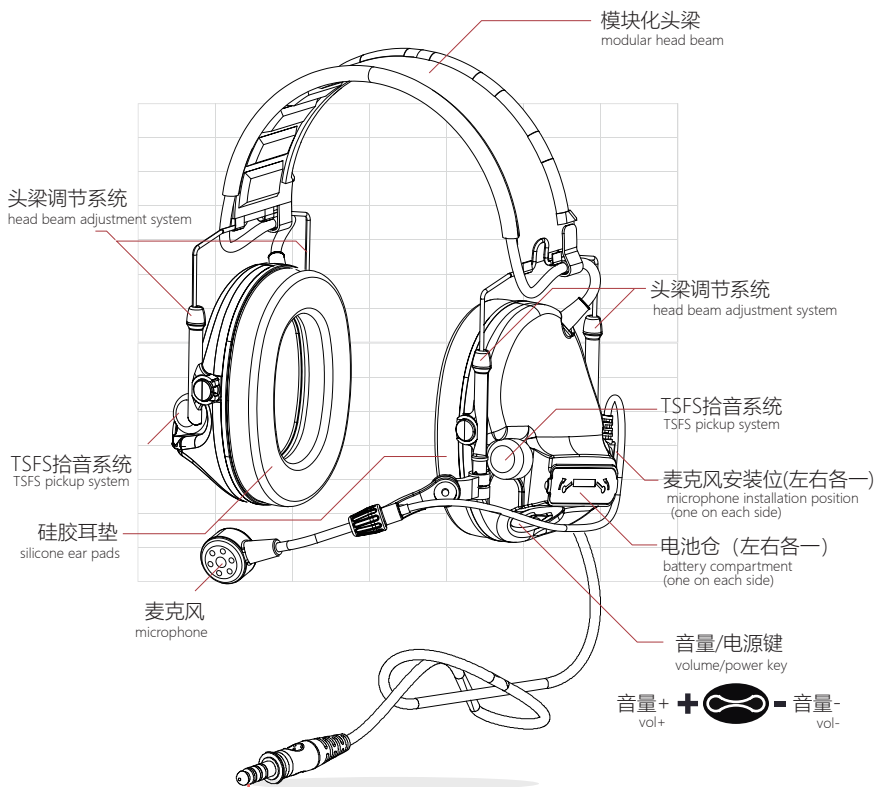
HIGH BATTERY LIFE

The theoretical battery life is up to 72 hours.

·The headset has an energy-saving automatic shutdown function, which automatically shuts down in 4 hours without any operation.



外观功能介绍/APPEARANCE FUNCTION INTRODUCTION



● 北约标准(U-174)接口定义

Compatible with NATO (U-174) wiring push-to-Talk Radio Adapter

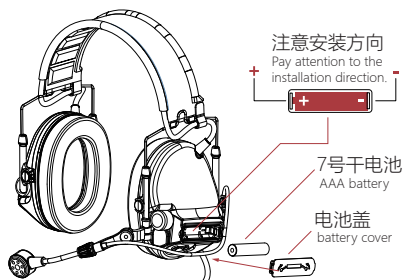
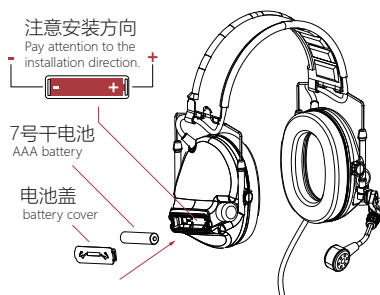
麦克风负极 MIC-

喇叭正极 SPK+



麦克风正极 MIC+ 喇叭负极 SPK-

使用教程/USE THE TUTORIAL



1. 掀开电池盖/ Open battery cover

2. 放置AAA (7号) 干电池/ Put in AAA battery

3. 注意放置方向, 按照电池仓内标示放置电池。 “+”为正极, “-”为负极。
电池装反 无法开机。

Pay attention to the placement direction, and place the battery according to the markings in the battery compartment. "+" is positive and "-" is negative.
The battery is installed backwards and cannot be turned on.

※ 左右需各放置一节/ Left and right need to be placed

4. 按照个人佩戴舒适为目标, 如图上下调节耳机到自己合适的佩戴位置。
/ According to the personal wearing comfort as the goal, adjust the headset up and down to the appropriate wearing position as shown in the figure.

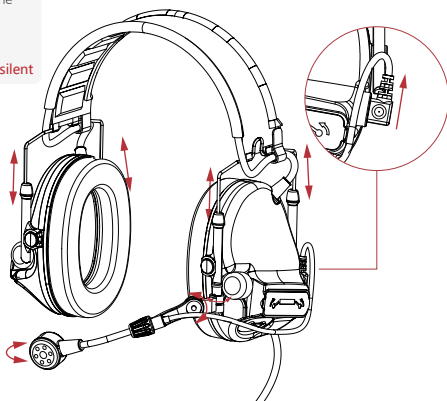
5. 注意麦克风接头安装方向, 线缆朝上。
/ Pay attention to the installation direction of the microphone connector, as shown in the figure

※ 接头接反麦克风无声

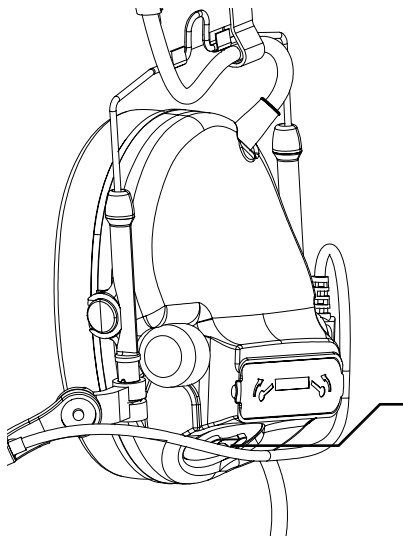
/ The connector is reversed and the microphone is silent



佩戴示意图



使用教程/USE THE TUTORIAL



[VOL+]
音量+



[VOL-]
音量-

操作方法/OPERATION METHOD

- 开机：长按音量+或长按音量-/Power on: long press volume + or long press volume -
- 关机：长按音量-/Long press volume-
- 侦听模式：在最大音量下长按音量+3s（并有“超大音量”提示音），10S后自动关闭
Listening mode: long press the volume +3s at the maximum volume (and there is a "super volume" prompt tone), it will automatically turn off after 10s
- 语言切换：同时长按音量+和音量-
/Language switching: long press volume + and volume - at the same time

更多产品资讯和相关资料可登录官网进行查询。

For more product information and related information, please log in to the official website for inquiries.

FCS官网网址：

FCS official website website:

<http://www.fcs.fun>

关注官方微信公众号可获取更多产品信息。

Follow the official WeChat account for more product information.



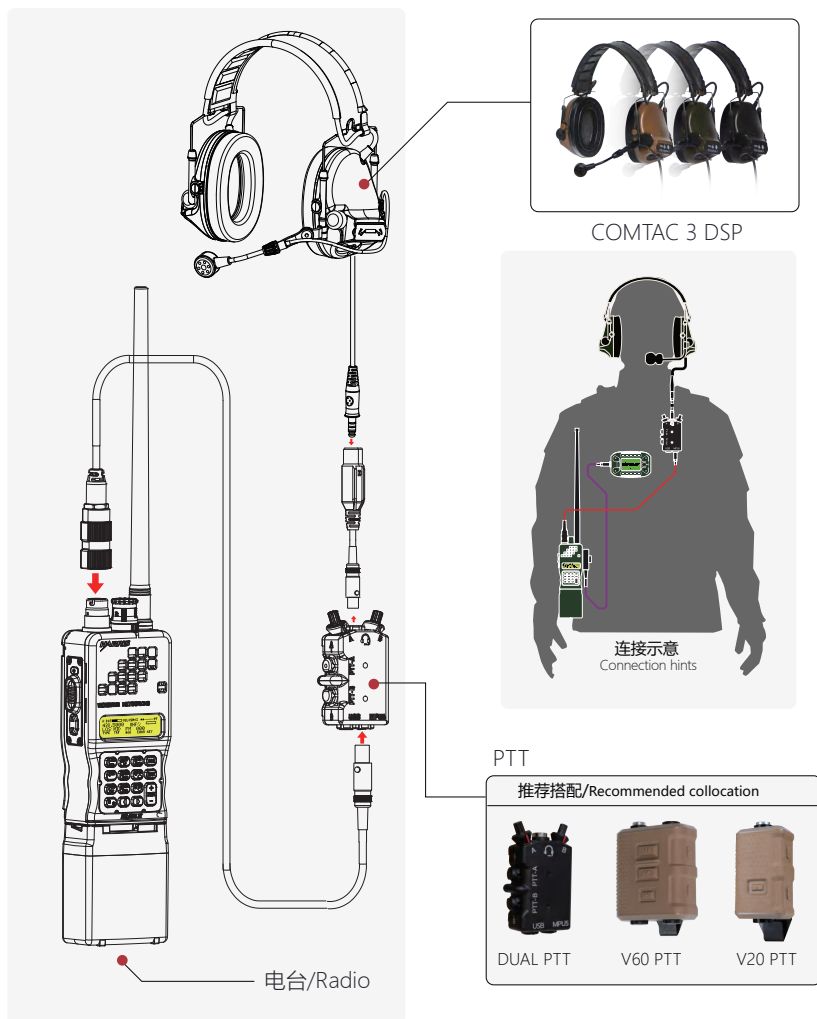
微信公众号 /wechat

通信连接示意

/COMMUNICATION CONNECTION DIAGRAM

按图示连接PTT和电台实现通信，推荐搭配下图所示PTT。

/Connect the PTT and the radio as shown in the figure to achieve communication. It is recommended to use the PTT shown in the figure below.



头盔支架选装搭配/OPTIONAL HELMET SUPPORT

通过选装相应的导轨连接桥套件和连接附件可实现FAST导轨战术头盔的盔戴式，wendy 2.0战术头盔的盔戴式，wendy 3.0战术头盔的盔戴式，后挂样式。

By selecting the corresponding rail connecting bridge kit and connecting accessories, the helmet wearing style of the FAST rail tactical helmet, the helmet wearing style of the wendy 2.0 tactical helmet, the helmet wearing style of the wendy 3.0 tactical helmet, and the rear hanging style can be realized.



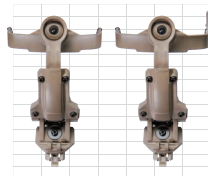
选件/OPTIONS



耳罩魔术贴 / Velcro

通过魔术贴选件，可将战队标识粘贴在耳罩上面。

/With the Velcro option, the team logo can be affixed to the headset.



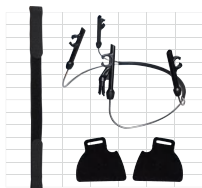
FCS FAST导轨支架连接桥

/ FCS FAST Helmet Rail Mount Kit

适配FAST导轨的战术头盔。
实现COMTAC3 DSP版的FAST 导轨
战术头盔佩戴样式。

/Tactical helmet for FAST rails.

FAST rail to implement COMTAC3 DSP version
Tactical helmet helmet style.



后挂样式套件

/Rear Mount Style Kit

搭配后挂式套件可实现后挂样式的
佩戴样式。后挂样式可兼容市面
上大部分战术头盔，如护耳战术头盔，
fast导轨战术头盔，wendy战术头盔等。

/With the rear hanging kit, the wearing style of
the rear hanging style can be realized. The rear
hanging style is compatible with most tactical
helmets on the market, such as ear protection
tactical helmets, fast rail tactical helmets,
wendy tactical helmets, etc.



重要提醒/IMPORTANT REMINDER

- 为确保耳机有效保护听觉系统（耳朵），请仔细阅读说明书的操作方式，将耳机调整至个人舒适的佩戴方式进行佩戴。
- 长期不使用耳机请将电池取出，避免电池漏液损坏耳机。
- 耳垫必须进行定期检查和维修，以防出现破裂或磨损而影响佩戴。
- 请定期清洁耳机外部
- 耳机支持IP66防水。
- 请勿将耳机进行暴晒或存放于高温环境当中。
- 在有易爆气体的地方，要关闭设备。
- In order to ensure that the headsets can effectively protect the hearing system (ears), please read the operation method of the manual carefully, and adjust the headsets to a comfortable wearing method.
- Please take out the battery if the headset is not used for a long time to avoid battery leakage and damage to the headset.
- Earpads must be regularly inspected and maintained to prevent cracks or wear that could affect the fit.
- Please clean the outside of the headset regularly.
- The headset supports IP66 waterproof.
- Do not expose the headset to sunlight or store it in a high temperature environment.
- Shut down the equipment in the place where there is explosive gas.

警告/WARNING

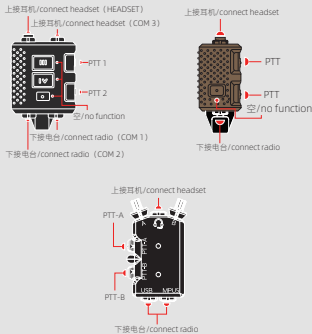
严禁没有维修资格的人员拆卸、维修设备，如果设备在使用过程中出现不能解决的问题，请您咨询授权维修人员或致电经销商。私自拆装会对耳机造成不可逆转的损害，因私自拆装对耳机造成的损害不在保修范围之内。

严禁将耳机浸泡在水中，因浸水对耳机造成的损害不在保修范围之内。

It is strictly forbidden to disassemble and repair the equipment by personnel who are not qualified for maintenance. If there is a problem that cannot be solved during the use of the equipment, please consult authorized maintenance personnel or call the dealer. Unauthorized disassembly will cause irreversible damage to the headsets, and the damage to the headsets caused by unauthorized disassembly is not covered by the warranty.

It is strictly forbidden to immerse the headset in water, the damage to the earphones caused by water immersion is not covered by the warranty.

常见故障及检修维修/COMMON FAULTS AND MAINTENANCE

故障/FAULT	原因/REASON	解决方法/SOLUTION
无法开机 Can not boot	1. 电池电压太低 The battery voltage is too low 2. 电池极性接反 The battery polarity is reversed	1. 更换新电池; Replace the battery with a new one; 2. 正确按极性安装电池。 Install the battery with the correct polarity.
无法发送语音 Unable to send voice	1. 麦克风接头松动 1. Microphone connector loose 2. 麦克风接头插反 2. The microphone connector is inserted backwards	1. 请插紧麦克风接头 Please plug the microphone connector tightly 2. 请将麦克风线缆朝上插入麦克风接口 2. Insert the microphone cable upwards into the microphone connector
连接/通讯异常 connection/ communication abnormal	1. 连接线没有正确连接。 1. The cable is not properly connected. 2. 使用非NATO标准的PTT。 2. Use non-NATO standard PTT.	<p>请正确连接PTT和对讲机/Please connect PTT and radio correctly FCS V60 PTT, FCS V20 PTT, FCS DUAL PTT 正确连接示意图如下 The correct connection diagram of FCS V60 PTT, FCS V20 PTT, FCS DUAL PTT is as follows</p>  <p>上接耳机/connect headset (HEADSET) 上接耳机/connect headset (COM 3) PTT 1 PTT 2 空/no function 下接电台/connect radio (COM 1) 下接电台/connect radio (COM 2) 上接耳机/connect headset PTT PTT 空/no function 下接电台/connect radio 上接耳机/connect headset PTT-A PTT-B 下接电台/connect radio</p> <p>请使用NATO标准的PTT。 Please use NATO standard PTT.</p>

关于保修/ABOUT THE WARRANTY

本产品耳机主体保修期限为一年，胶件不在保修范围之内。

若您的耳机需要进行保修，请联系当地经销商进行保修。

The warranty period of the main body of this product is one year, and the plastic parts are not covered by the warranty.

If your headset needs warranty, please contact your local dealer for warranty.

产品参数/PRODUCT PARAMETERS

电子元器件 /Electronic Component	规格参数 /Specifications	
拾音元件 /pickup element	灵敏度 /Sensitivity	-38dB (± 3 dB, 各频率平均值) /-38dB (± 3 dB, average for each frequency)
	启动降噪值 /Enable noise reduction value	≈ 85 dB
	电源 /power	7号电池 (AAA)*2干电池 / AAA*2 dry battery
	拾音特性 /Pickup characteristics	全向 /Omnidirectional
	尺寸直径 /Size diameter	27mm
扬声器元件 /speaker element	抗阻特性 /Impedance characteristics	32 OHM
	额定功率 /rated power	30mW
	频响特性 /Frequency response characteristics	全频段 /full frequency band
麦克风元件 /microphone element	麦克风 /microphone	驻极电容麦克风 /Electret condenser microphone
	喇叭 /trumpet	动圈 /moving coil
环境音频声响 /Ambient sound audio sound	20-15000Hz	
降噪值 /Noise reduction value	26dB	
接头 /linker	U174/u	
电源 /power	7号 (AAA) 干电池*2用于拾音降噪供电 No. 7 (AAA) dry battery*2 for sound pickup and noise reduction	
兼容 /compatible	各种北约标准通信机型 /Various NATO standard communication models	
材质 /material	ABS+POM	
重量 /weight	400g	



www.fcs.fun

广州军研测控电子科技有限公司

Guangzhou Junyan Measurement and Control Electronic Technology Co., Ltd.