

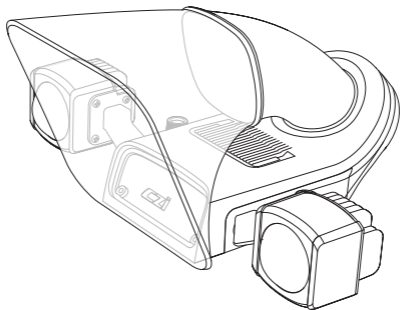
# LP20

## 探照广播一体机

2024.12 V2.0

# 用户手册

## User Manual





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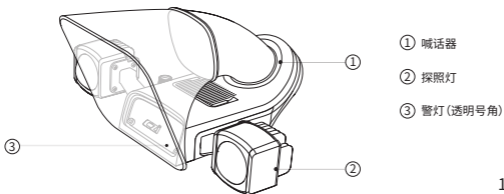


## 一、免责声明与警告

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- 2、LP20如遇硬件问题，请返厂联系售后服务，切勿自行拆卸维修，否则将失去保修、维修资格。
- 3、请勿手动来回快速旋转探照灯，否则由此带来的损坏自行承担！
- 4、LP20最大声压为120dB，近距离使用可能会对人耳听力造成永久性伤害！请不要近距离时使用最大音量，否则由此带来的伤害自行承担！
- 5、首次使用需要校准指南针和关闭上视避障。
- 6、无人机相机方向请与机场箭头方向一致。

## 二、LP20介绍

LP20是全球首款将探照灯、喊话器、警灯、拾音功能融合的四合一负载，适配DJI Matrice 3D 和 DJI Matrice 3DT无人机，专为大疆自动机场2而设计。LP20各项性能领先（有效探照距离大于100m，有效广播距离大于300m，警灯夜晚可视距离大于1000m），防护性能出众（防尘防水IP53、工作温度-20---50℃，电磁防护小于2dB），为行业用户带来更多可能！



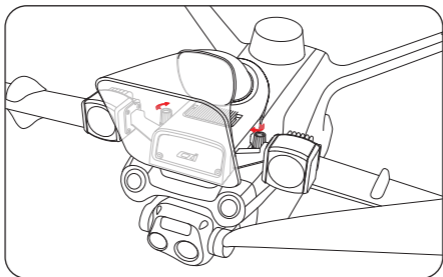
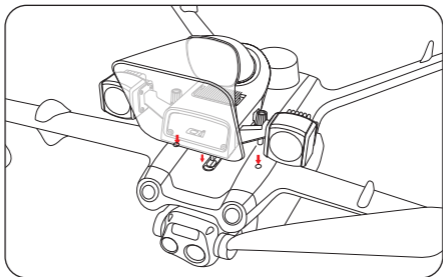
### 三、LP20参数

#### LP20规格参数

外形尺寸 /mm	L:127 x W:147 x H:78
重量	200±5g
防护等级	IP53
工作温度	-20--50°C
总功率	<50W
声压	120dB@1m
有效广播距离	>300m
探照灯fov	13.5°
中心照度	32lux@50m 14lux@75m 8lux@100m
软件支持	司空2、Pilot 2、成至助手
喊话方式	录音喊话 多国TTS 文件播放
警灯模式	红蓝爆闪 蓝蓝爆闪 红红爆闪 黄黄爆闪
其他功能	拾音反馈 光斑跟随 AI归中

## 四、LP20安装说明

- 1、将LP20 Type-C口对准无人机接口，将手拧螺丝拧紧，然后再启动无人机(请勿热插拔)



## 五、Pilot2使用说明

### 1、指南针校准

首次使用LP20需要校准飞机指南针,如下图操作:

右上角设置---飞控参数设置---传感器状态---指南针校准。



## 2、设置上视避障

关闭上视避障，

右上角设置---感知避障设置--上方设置。



## 3、控件界面介绍

进入Pilot2界面后,点击右侧最下按键“psdk”,呈现出主功能界面。



- ①警灯 ②探照灯开关 ③探照灯亮度 ④俯仰微调  
 ⑤信息栏 ⑥录音喊话(文件上传) ⑦TTS ⑧文件播放  
 ⑨监听(拾音反馈)

### 3.1 录音喊话 (内含文件上传)

录音喊话界面可进行点击说话,并且能当前录音保存在本地。



上传音频文件播放:通过点击上图录音喊话右侧“≡”显示当前遥控器录音音频列表,再点击音频列表右侧“🔊”图标可将遥控器本地音乐上传。



### 3.2 TTS(文本转语音)

可输入所需播放的文字,进行广播。



### 3.3 俯仰微调

可调整探照灯角度,保证探照灯处于相机中心。



### 3.4 文件播放、警灯、探照灯开关、亮度调节

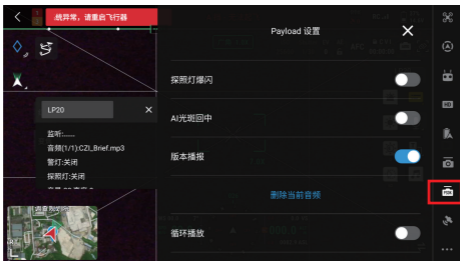


### 4、其他设置

点击右上角三点, 找到“psdk”并点击,

其他功能: ①探照灯爆闪 ②AI光斑回中 ③版本播报 ④删除当前音频  
⑤循环播放 ⑥音量调节。

(注:tts人声及语速调节只能在司空中使用, Dji Pilot2中无法使用)。



## 六、司空2使用说明

- 1、进入司空2界面,点击Matrice 3D进入界面;并且点击负载控制获取当前设备控件。



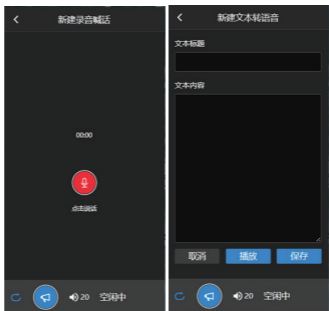
2、点击左下方psdk图标，会显示当前设备主控件。



①TTS ②信息栏 ③文件播放 ④警灯 ⑤探照灯 ⑥亮度调节 ⑦俯仰微调

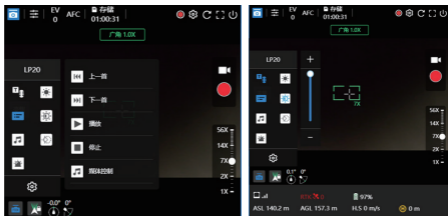
2.1 点击第一个功能按键可进行录音喊话、文本转语音或者本地上传音频功能。

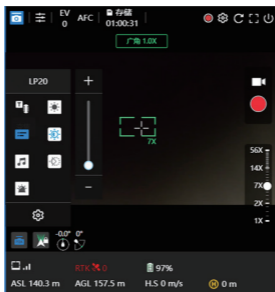
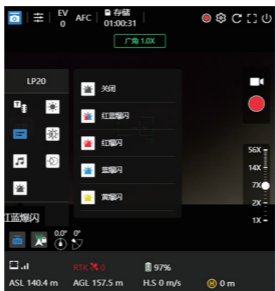




2.2 可进行对于音频的切换及播放,切换警灯模式、探照灯模式。

(注意:探照灯亮度调节可直接滑动浮动调,不可用加减号进行调节)。





### 2.3 舵机微调

可调整探照灯角度, 保证探照灯处于相机中心。

### 3、点击下方设置按钮，可进入功能使用。



## 七、固件升级

### 1、远程升级（待司空2开放接口）。

### 2、大疆助手升级

打开最新的DJI Assistant 2 (Enterprise Series)软件,用Type-C线连接飞机,然后等待弹出设备。

选择固件即可升级(不可进行降级或同版本升级)。



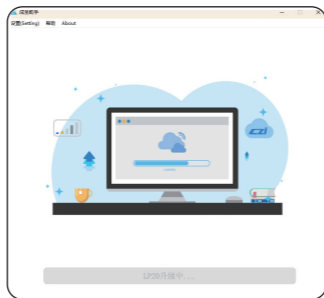
### 3、成至助手升级

打开成至助手软件,用Type-C线连接LP20,然后等待成至助手连接设备(请将Type-C线的箭头朝前连接设备)。





选择离线升级, 选择固件进行升级;直到显示固件升级完成。





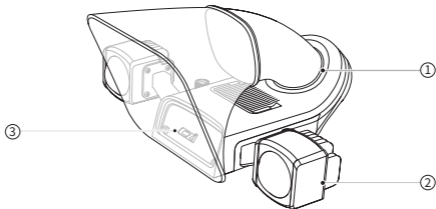
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- 2、If the LP20 has hardware problems, please return to the manufacturer and contact the after-sales service, and do not disassemble and repair by unauthorized personnel, otherwise you will lose the warranty and repair eligibility.
- 3、Do not manually rotate the searchlight back and forth quickly. Otherwise, any damage caused thereby shall be borne by yourself!
- 4、The maximum sound pressure of LP20 is 120 dB, close use may cause permanent damage to the ear hearing! Please do not use the maximum volume in close proximity. Otherwise, any damage caused thereby shall be borne by yourself!
- 5、First use require calibration compass and close the above viewing.
- 6、The direction of the drone camera is consistent with the direction of the airport arrow.

## II, Introduction to LP20

LP20 is the first four-in-one load that integrates searchlight, broadcasting devices, flashing lights and sound pickup in the world, adapting to DJI Matrice 3D and DJI Matrice 3DT drones, and specially designed for DJI Auto Airport 2. LP20 leads in various performances (effective searchlight distance greater than 100 m, effective broadcasting distance greater than 300 m, and the visible distance of the flashing light at night greater than 1000 m). It has outstanding protection performance (dustproof and waterproof IP53, temperature range -20 - 50°C, and the electromagnetic protection less than 2 dB), bringing more possibilities to industry users!

Product picture and introduction of parts:



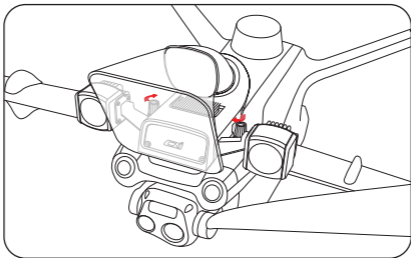
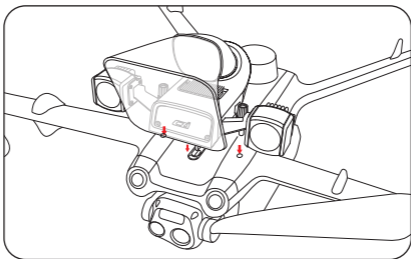
- ① Broadcasting devices    ② Searchlight    ③ Flashing lights (transparent horn)

### III. Specification of LP20

LP20(Model)	
Dimensions /mm	L:127 x W:147 x H:78
Weight	200±5g
Protection grade	IP53
Operating temperature	-20--50°C
Total power	<50W
Sound pressure	120dB@1m
Effective broadcasting distance	>300m
Searchlight fov	13.5°
Central illuminance	32lux@50m 14lux@75m 8lux@100m
Software support	FlightHub 2, pilot 2, CZI Assistant
Broadcasting mode	Recording broadcasting Multi-country TTS File playback
Flashing light mode	Red and blue flashing Blue and blue flashing Red and red flashing Yellow and yellow flashing
Other functions	Sound pickup feedback Spot following AI centering

## IV、Installation Tutorial for LP20

- 1、Align the LP20 Type-C port with the drone interface, tighten the hand-tightened screw, and then start the drone (Do not hot swap)

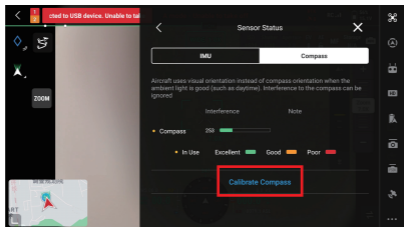
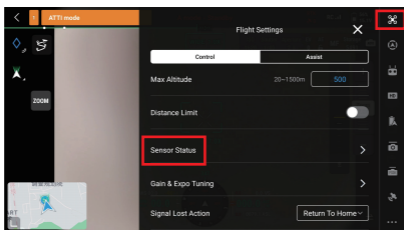


## V.Use Tutorial for Pilot 2

### 1、Compass calibration

When using LP20 for the first time, the drone's compass needs to be calibrated. Operate as shown in the following figure.

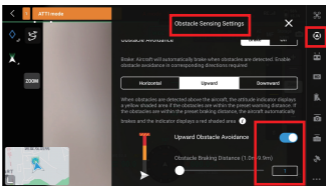
Settings in the upper right corner - Flight control parameter settings - Sensor status - Compass calibration.



## 2、Set up the above viewing

Close the above viewing,

Settings in the upper right corner - Perception obstacle avoidance settings - Upper settings.



## 3、Introduction to the control interface

After entering the Pilot 2 interface, click the bottom right button “psdk” to display the main function interface.



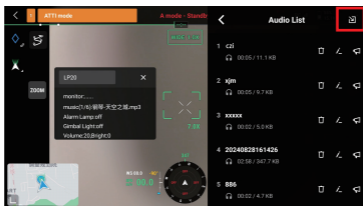
- ①Flashing light    ② Searchlight switch    ③Searchlight brightness
- ④Pitch fine-tuning    ⑤Information bar
- ⑥Recording and broadcasting(file upload)    ⑦TTS    ⑧File playback
- ⑨monitor (Pick up sound)

### 3.1 Recording and broadcasting (including file upload)

The recording and broadcasting interface allows for click-to-talk and can save the current recording locally.

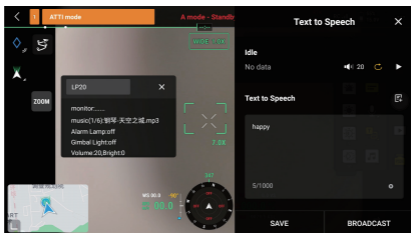


You can also select and upload an audio file for playback. By clicking on the right side of the recording and broadcasting in the above figure “☰”, the current remote controller recording audio list is displayed. Then, click the icon “📎” on the right side of the audio list to upload and play the local music on the remote controller.



## 3.2 TTS (Text-to-Speech)

You can input the text to be played for broadcasting.

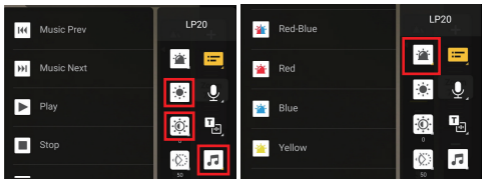


## 3.3 Pitch fine-tuning

Adjust the search lamp angle to ensure the searchlight is in the center of the camera.



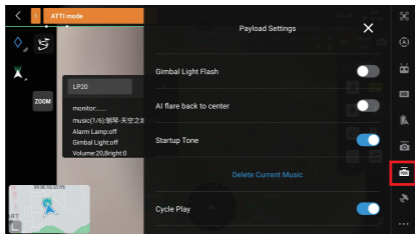
### 3.4 File playback, flashing light, searchlight switch and brightness adjustment



#### 4. Other settings

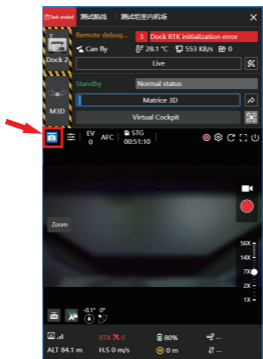
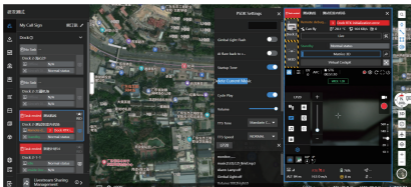
Other functions: ① Searchlight flashing; ② AI spot centering; ③ Version broadcasting; ④ Delete current audio; ⑤ Loop playback; ⑥ Volume adjustment.

(Note: TTS voice setting and speech rate setting can only be used in the FlightHub and cannot be used in DJI Pilot 2).



## VI、Use Tutorial for FlightHub 2

- 1、Enter the FlightHub 2 interface, click “Matrice 3D” to enter the interface. Then click “Load Control” to obtain the current device control.

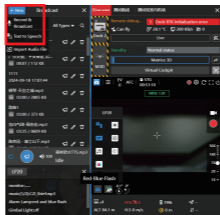


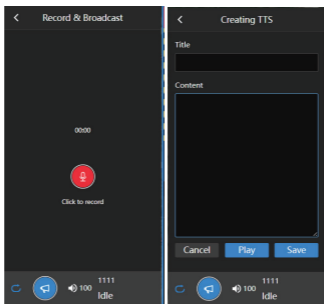
- 2、Click the psdk icon at the bottom left to display the main control of the current device.



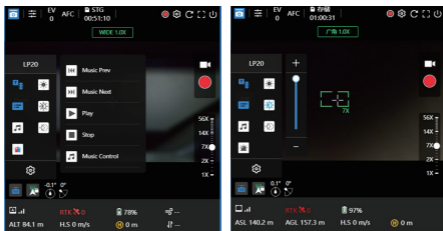
- ①TTS ②Information bar ③File playback ④ Flashing light  
⑤Searchlight ⑥Brightness adjustment ⑦Pitch fine-tuning

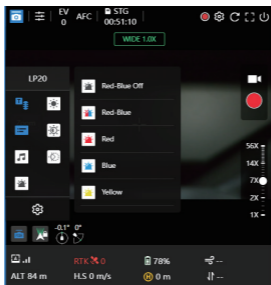
- 2.1 Clicking on the first function key allows for recording and broadcasting, text-to-speech, or uploading local audio files.





2.2 It can switch and play audio, and switch flashing light mode and searchlight mode. (Note: The brightness adjustment of the searchlight can be directly adjusted by sliding the floating bar and cannot be adjusted by using plus and minus signs).

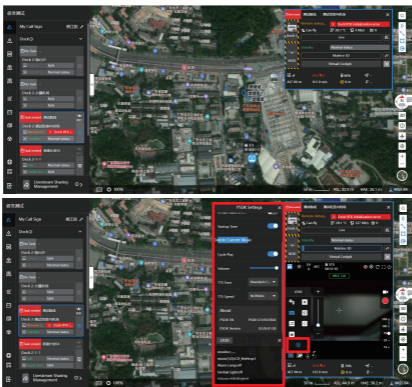




### 2.3 Steering gear fine-tuning

Adjust the search lamp angle to ensure the searchlight is in the center of the camera.

### 3、Click the setting button below to use this function.



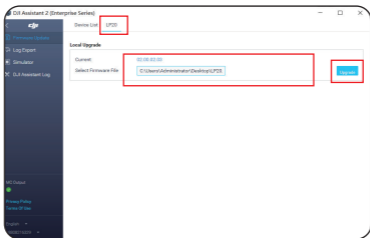
## VII、Firmware Upgrade

### 1、Remote upgrade (waiting for FlightHub 2 to open the interface)

### 2、Upgrade via DJI Assistant

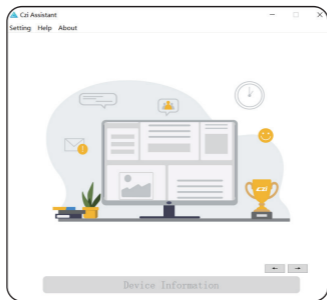
Install LP20 on the drone. Then open the latest DJI Assistant 2 (Enterprise Series) software. Connect the drone with a Type-C cable, and then wait for the device to pop up.

Select the firmware to upgrade. (Downgrading or upgrading to the same version is not allowed).



### 3、Upgrade via CZI Assistant

Open the CZI Assistant software. Connect LP20 with a Type-C cable. Then wait for the CZI Assistant to connect to the device. (Please talk about the arrow of the Type-C line).





Select offline upgrade and choose the firmware for upgrade; wait until the firmware upgrade is completed.





## 附件

### 装箱清单(PACKING LIST)

名称/NAME	数量/QUANTITY
LP20主机 LP20 Host	1
装箱清单 Packing list	1
说明书 Instructions	1
合格证 Certificate	1
Type-C数据线 Type-C Data cable	1

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