

LTL ACORN®



User Manual of Speaker

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Ver: Ltl-YX-EN-002

Introduction

The Ltl-8830 series cameras have been upgraded with a broadcast feature that supports multiple playback modes. When the broadcast function is enabled and the speaker is connected in ON mode, the camera can play audio files according to the preset broadcast mode while recording videos and photos.

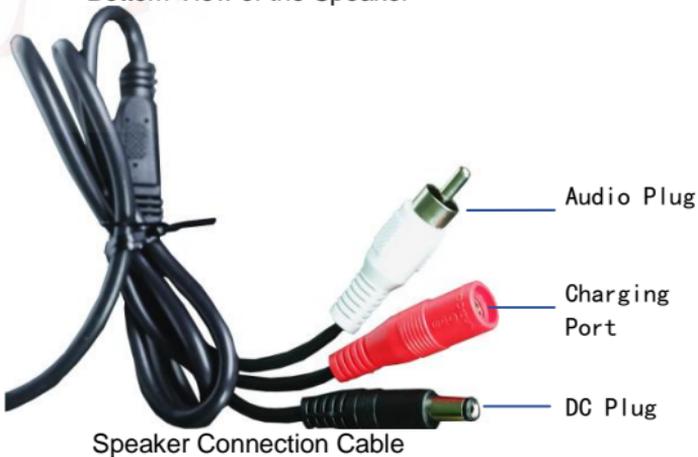
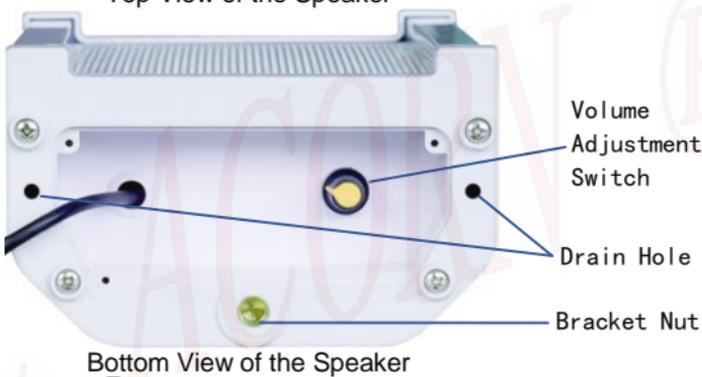
The camera uses a customized speaker with a maximum power output of 20W. It achieves maximum volume of over 100dB at a distance of 2 meters outdoors. The speaker is powered by two built-in sets of 3x18650 lithium batteries, allowing for more than one year of outdoor working. Additionally, it supports solar charging, significantly extending the operating time of both the camera and the speaker.

With an IPX7 protection rating, the speaker is highly durable and suitable for various environmental conditions.

Speaker Diagram



Overall View of the Speaker



Advanced Operations

1.1 Setting Broadcast Mode on the Camera

The **LTL-8830 camera** has its broadcast function **OFF by default**, follow below steps to enable and configure the broadcast function:

- ◆ **Connect the camera to an external display(switch at ON position).**
- ◆ Press MENU button to access the menu setting.
- ◆ Press button ▲ / ▼ to move to menu of Broadcast, press ◀ / ▶ to change broadcast setting to **'On'** and enter the **sub-menu** to set up the playback mode as needed.

Parameters		Setting	Function Description
Play mode	timing : timing / Close;	Timing: A / B A:random; appoint; B:random; appoint;	<p>A / B random : In ON mode, each motion-triggered randomly plays one audio file from the ' Alarm\A or B ' folder (do not play when timing / time-lapsetrigger).</p> <p>A / B appoint : When the camera is triggered, the speaker plays an audio file at the specified time. If multiple files exist within the same category, one is randomly selected(invalid for time-lapse image).Sound Categories: Includes Dog, Tiger, Leopard, Human, Lynx, Red Fox, Black Bear, Bird A, Bird B, and Bird C, each type of sound should be stored in its designated folder.</p> <p>Example: To play bird sounds after triggering between 4:00 AM and 5:00 AM, use the Up/Down key to select 04:00~05:00, then the Left/Right key to choose 'Bird' and press OK to confirm. Repeat the operation for other time ranges to play random audio files of different species at different time.</p> <p>According to the set play days and pause days to play the audio files of broadcast modes A and B in a loop.</p>

		Pause Days: 1~30;	When setting the days for pausing playback during the switch between Timing A and B loop playback, from 1 to 30 day can be set.
		A Playback days:1~30;	Set the number of days to play for B, from 1 to 30 days.
		B Playback days:1~30;	Set the number of days to play for B, from 1 to 30 days.
	Induction: Close / random / appoint;	random	In ON mode, each motion-triggered randomly plays one audio file from the 'SenseRand' folder (do not play when timing / time-lapsetrigger).
		appoint	When the camera is triggered, the speaker plays an audio file at the specified time. If multiple files exist within the same category, one is randomly selected (invalid for time-lapse image). Sound Categories: Includes Dog, Tiger, Leopard, Human, Lynx, Red Fox, Black Bear, Bird A, Bird B, and Bird C, each type of sound should be stored in its designated folder. Example: To play bird sounds after triggering between 4:00 AM and 5:00 AM, use the Up/Down key to select 04:00~05:00, then the Left/Right key to choose 'Bird' and press OK to confirm. Repeat the operation for other time ranges to play random audio files of different species at different time.
Volume		Default 5, 1~8, configurable	Set up the volume of playing audio, 1 is the minimum, 8 is the maximum.
Lapse		Default 5 sec. 5~30 sec, configurable.	You can set the time of delayed playback after starting shooting; The default is 5 seconds, means camera starts playing audio after 5 seconds since the camera starts recording.

1.2 Audio File Storage Path for Broadcast Mode

Please prepare the audio files in WAV format with a 48000 Hz sampling rate, mono channel, and 16-bit depth. The file name should not exceed 20 characters and must not include Chinese characters or special symbols, or the audio may not play.

Connect the SD card to a computer, manually create folder paths based on playback modes and sound types, and save the prepared audio files in the corresponding folders on the SD card.

The audio file storage paths are as follows:

Time-specified playback (Induction - appoint):

SD card\audio\SenseSpecify\dog	Category for audio of Dog
SD card\audio\SenseSpecify\human	Category for audio of Human
SD card\audio\SenseSpecify\leopard	Category for audio of Leopard
SD card\audio\SenseSpecify\lynx	Category for audio of Lynx
SD card\audio\SenseSpecify\tiger	Category for audio of Tiger
SD card\audio\SenseSpecify\fox	Category for audio of Fox
SD card\audio\SenseSpecify\bear	Category for audio of Bear
SD card\audio\SenseSpecify\bird A	Category for audio of Bird A
SD card\audio\SenseSpecify\bird B	Category for audio of Bird B
SD card\audio\SenseSpecify\bird C	Category for audio of Bird C

Random playback:

SD card\audio\SenseRand

Periodic Loop

A:Random Playback

SD card\audio\Alarm\A

B:Random Playback

SD card\audio\Alarm\B

A: Time-specified playback (A appoint)

SD card\audio\Alarm\A\dog	Category for audio of Dog
SD card\audio\Alarm\A\human	Category for audio of Human
SD card\audio\Alarm\A\leopard	Category for audio of Leopard
SD card\audio\Alarm\A\lynx	Category for audio of Lynx
SD card\audio\Alarm\A\tiger	Category for audio of Tiger
SD card\audio\Alarm\A\fox	Category for audio of Fox
SD card\audio\Alarm\A\bear	Category for audio of Bear
SD card\audio\Alarm\A\bird A	Category for audio of Bird A
SD card\audio\Alarm\A\bird B	Category for audio of Bird B
SD card\audio\Alarm\A\bird C	Category for audio of Bird C

B: Time-specified playback (B appoint)

SD card\audio\Alarm\B\dog	Category for audio of Dog
SD card\audio\Alarm\B\human	Category for audio of Human
SD card\audio\Alarm\B\leopard	Category for audio of Leopard
SD card\audio\Alarm\B\lynx	Category for audio of Lynx
SD card\audio\Alarm\B\tiger	Category for audio of Tiger
SD card\audio\Alarm\B\fox	Category for audio of Fox
SD card\audio\Alarm\B\bear	Category for audio of Bear
SD card\audio\Alarm\B\bird A	Category for audio of Bird A
SD card\audio\Alarm\B\bird B	Category for audio of Bird B
SD card\audio\Alarm\B\bird C	Category for audio of Bird C

Note: The audio file should be stored in the specified path as above, otherwise the audio will not be played. There is no limit on the number of audio files in each storage path. If multiple audio files are stored in the same folder, the camera will randomly play an audio in this folder.

1.3 Connecting the Speaker to the Camera

After setting the broadcast parameters and audio files on the camera, connect the speaker to the camera, the camera can play the audio through the speaker after automatically shooting in ON mode.

The steps to connect the speaker are as follows:

- Turn the camera switch to the ON position before close the camera with it's battery box, and open the silicone cover at the bottom of the camera.



- Insert the speaker adapter cable's Type-C USB plug with the unraised side facing up into the camera.



- Connect the white cable on speaker to adaptor cable.



- Installation as below:



1.4 Charging

The speaker has two built-in sets of rechargeable 18650 lithium-ion batteries, which can be charged by a power adapter or a solar panel.



Power adapter



9.5W solar panel

➤ Recharging by power adapter

Plug the power adapter into the 220V power outlet. Plug the charging plug of the power adapter into the red charging port of the speaker to charge the speaker. During the charging process, the power adapter indicator shows red, and the power adapter indicator turns green after fully charge.



Connect to power outlet-->Charging plug connects with charging port of speaker-->Start charging

➤ 9.5W solar panel charging

Fix the speaker and solar panel, you can choose the way to fix the speaker and solar panel according to the environment.



You can charge the speaker by connecting the charging plug of the solar panel to the red charging port of the speaker through the adapter provided.



Solar panel plug

Adapter

Speaker charging



Setting Scheduled Broadcast Mode on a Computer

A setting software "Audio Play Settings.exe" which can run on the computer could be used to configure the camera's playback function.

Visit LTL ACORN's website and download Audio Play Settings.exe.

Follow the link <http://www.ltlacorn.cn/?languageId=2> (**Download - > Infrared Camera Data download - > LL-8830 series Data download - > Audio Play Settings.exe**), save and Run the Audio Play Settings.exe software.

Format the SD card on the camera, then insert the SD card into computer(the SD card adaptor maybe needed if you computer doesn't have a SD card slot).

Below is the icon of the software:



Audio Play
Settings.exe

Double click to run the software Audio Play Settings.exe, you will see below interface:

Audio Playback Settings X

Save Directory

Playback Switch
 Off
 On

Volume 5

Copy File

Sensing Playback Mode

Playback Delay

Periodic Loop
 Timing Playback Mode A
 Periodic Loop B

Playback Pause Days Time Lapse

Shooting Interval H : M : S

Playback Days A Playback Days B

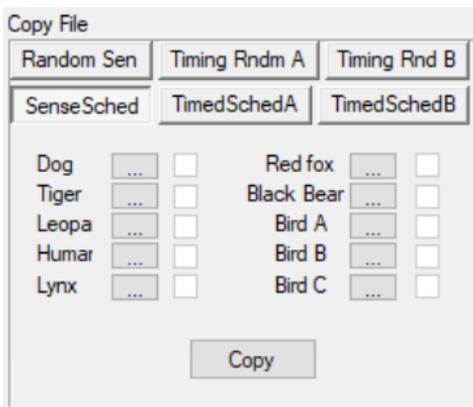
Status: Idle

Time-specified

Sensing Playback	Timing Playback A	Timing Playback B
00:00-00:59	Dog	12:00-12:59
01:00-01:59	Dog	13:00-13:59
02:00-02:59	Dog	14:00-14:59
03:00-03:59	Dog	15:00-15:59
04:00-04:59	Dog	16:00-16:59
05:00-05:59	Dog	17:00-17:59
06:00-06:59	Dog	18:00-18:59
07:00-07:59	Dog	19:00-19:59
08:00-08:59	Dog	20:00-20:59
09:00-09:59	Dog	21:00-21:59
10:00-10:59	Dog	22:00-22:59
11:00-11:59	Dog	23:00-23:59

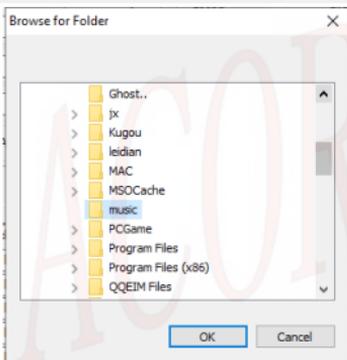
V1.1.9

Click on the to choose the save path for audio file and audio playback settings, it's recommended to choose SD card's root directory.

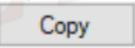


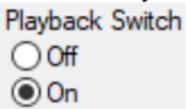
Click  on

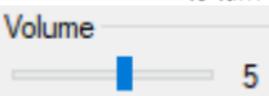
after the category,

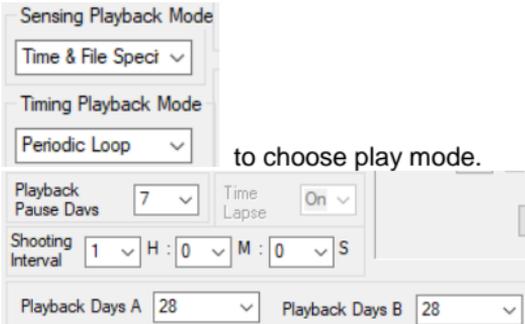


it will pop out a interface , find the folder of human or animal category audio file, click "OK" to select the folder of the audio file, the selection box will be displayed as , and then click

 button, you can directly copy the audio file to the specified path (audio files are automatically classified and saved in the specified folder path, no need to manually create a folder path on the SD card).

Click  to turn ON or OFF the play audio function.

Click  to adjust volume of audio playback.

Click  to choose play mode.

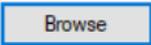
Click  to choose number of paused playing day of loop play,interval of shooting, number of day to play audio of loop playback A/B.

In the settings box below, you can set the audio to play of each time period.

Time-specified

Sensing Playback	Timing Playback A	Timing Playback B	
00:00-00:59	Dog	12:00-12:59	
01:00-01:59	Dog	13:00-13:59	Dog
02:00-02:59	Dog	14:00-14:59	Dog
03:00-03:59	Dog	15:00-15:59	Dog
04:00-04:59	Dog	16:00-16:59	Dog
05:00-05:59	Dog	17:00-17:59	Dog
06:00-06:59	Dog	18:00-18:59	Dog
07:00-07:59	Dog	19:00-19:59	Dog
08:00-08:59	Dog	20:00-20:59	Dog
09:00-09:59	Dog	21:00-21:59	Dog
10:00-10:59	Dog	22:00-22:59	Dog
11:00-11:59	Dog	23:00-23:59	Dog

After all the settings are complete, click  to generate configuration file CFG_broadcast.bin in the save path. If you have not selected

the SD card root directory in , please copy the CFG_BROADCAST.bin and folder“audio” to the SD card root directory. Retrieve the SD card containing the CFG_BROADCAST.bin and folder“audio” from the computer and insert it into the camera. Then connect the camera with external display, enter test mode (switch at ON), display shows “Configuration updated” means audio playback configuration updated to camera successfully.

Appendix I: Technical Specifications

Item	Specifications
Product Name	Outdoor Active Waterproof Speaker
Power	20W
Maximum Volume	Above 100dB (at 2 meters outdoors)
Volume Adjustment	Built-in volume adjustment knob
Audio Format Supported	WAV (Sampling Rate: 48000, Mono, 16-bit)
Audio Playback Delay	5~30 seconds, programmable
Audio Playback Modes	Loop, Random, Scheduled, combinable
Working Voltage	9~12.6V
Power Supply	Built-in 5200mA/h lithium battery
Interfaces	Audio input (white), charging port (red)
Charging	Power adapter, solar panel charging
Standby Current	150uA
Standby Time	3 years
Ingress Protection	IPX7
Working Temperature	-40°C ~ +70°C
Working Humidity	5% ~ 95%

Packing List

Part Name	Quantity
Speaker	1
Audio Adapter Cable	1
Power Adapter	1
Mounting Screws and Steel Plate	1 Set
Solar Panel (Optional)	1

Warranty

LTL ACORN products have an extremely low failure rate. We are committed to the warranty service of the product. The LTL ACORN speaker is covered by warranty of two years from the date of purchase.

Please note:

1. Man-made damage or water damage caused by improper use are not covered in the warranty.
2. The operating voltage range of the speaker is 9.0V to 12.6V, any damage resulting from operation outside this voltage range is excluded from the warranty.

For standard warranty claims, please contact the dealer from whom you purchased your LTL ACORN product directly.