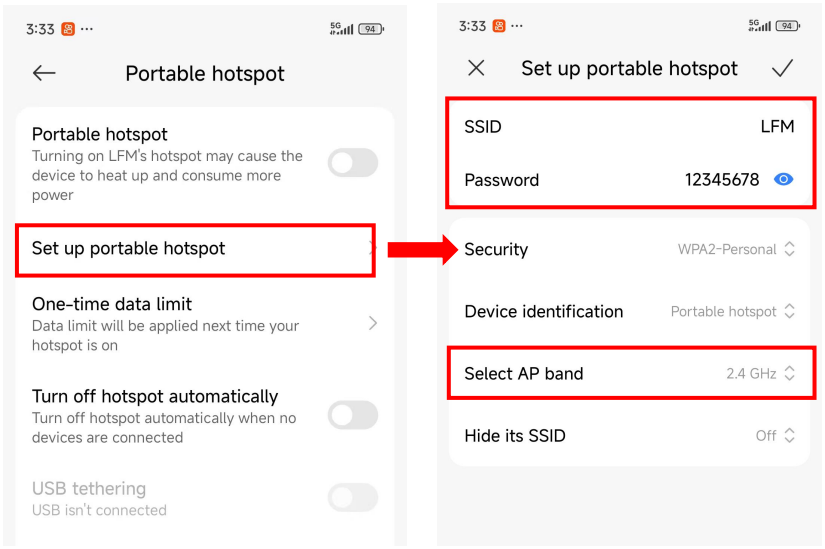
emeno®

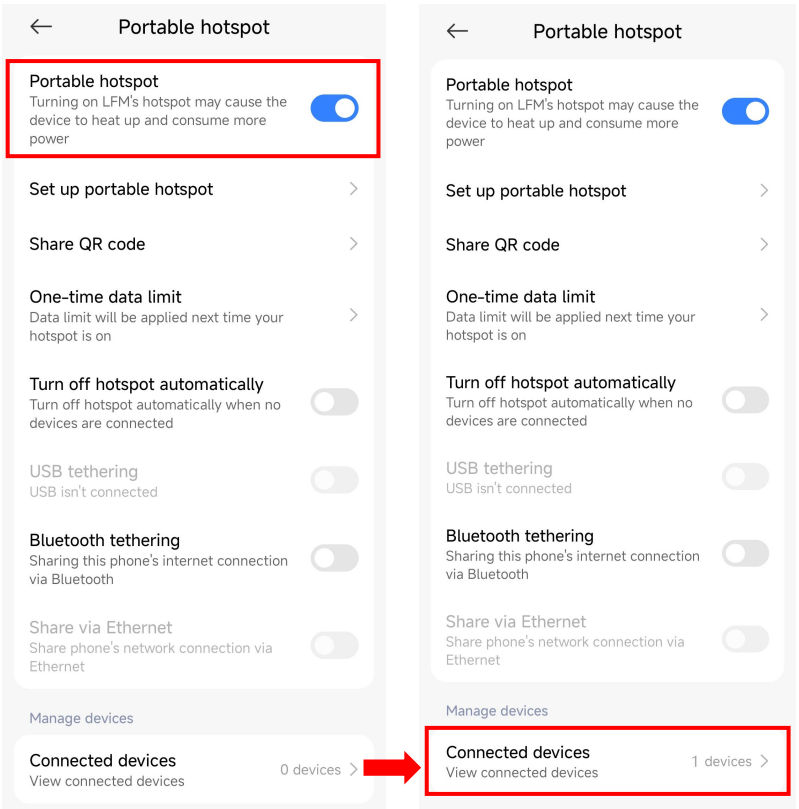
Mobile Tuning Instruction Manual

Ⅰ.The anti-theft device connects to the phone hotspot

1. ① The device is normally powered on → ② Open the hotspot settings interface of the phone → ③ Modify the hotspot name to: LFM; Password: 12345678 → ④ Band selection: 2.4GHz band

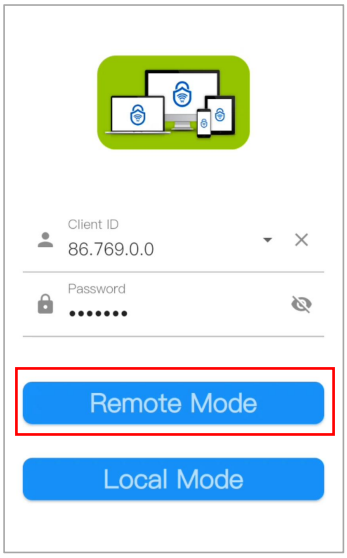


2. Open the hotspot，the number of connected devices has changed from 0 to 1, indicating successful connection to the phone hotspot.

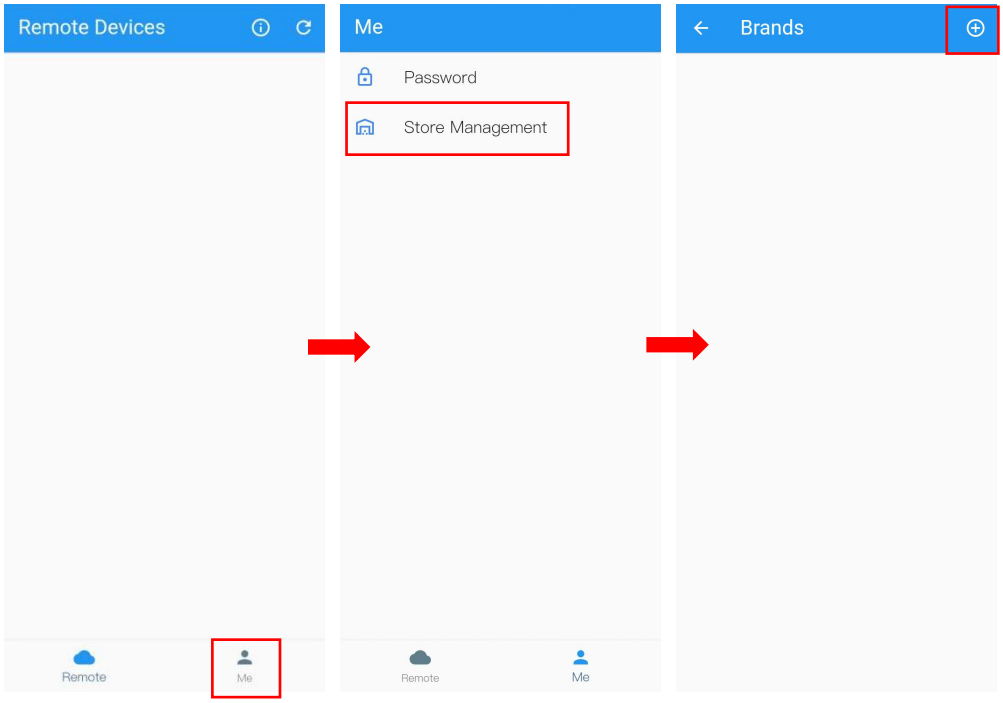


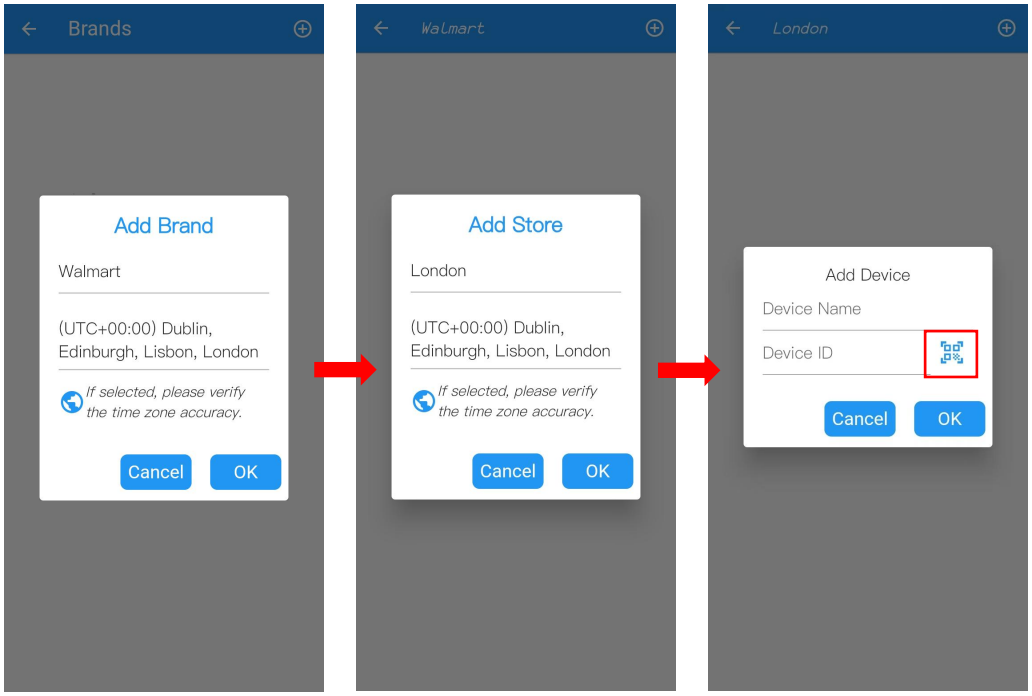
Ⅱ. Add the anti-theft antenna to the store's remote account

1. Open the tuning software, enter Client ID and Password. Click “Remote mode”.



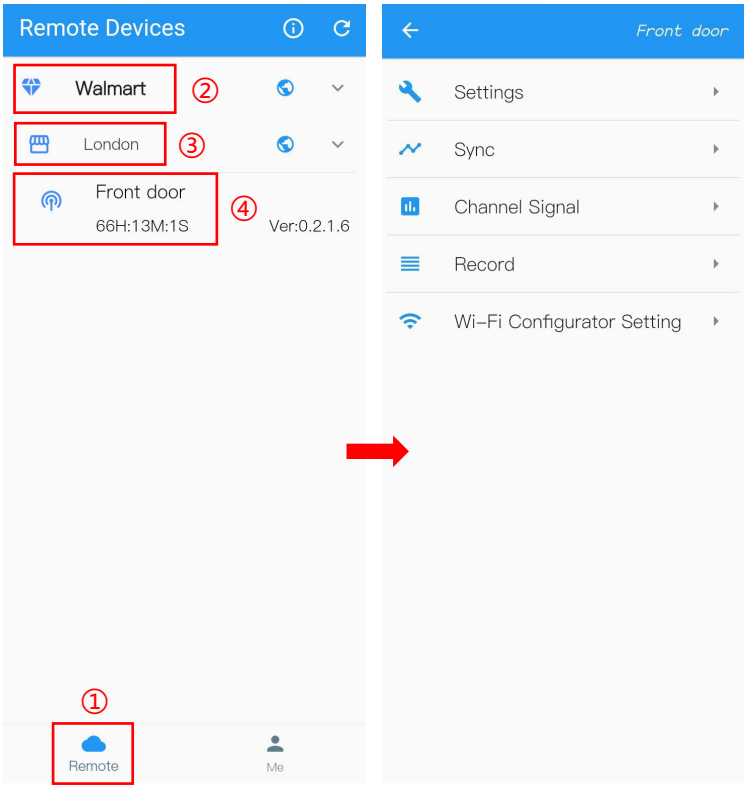
2. ① Click "Me" → ② Click "Store Management" → ③ Click "+" → ④ Add brand → ⑤ Add store → ⑥ Add device → ⑦ Enter device ID.





3. When adding the device ID, you can scan the QR code on the anti-theft antenna to display its ID information.

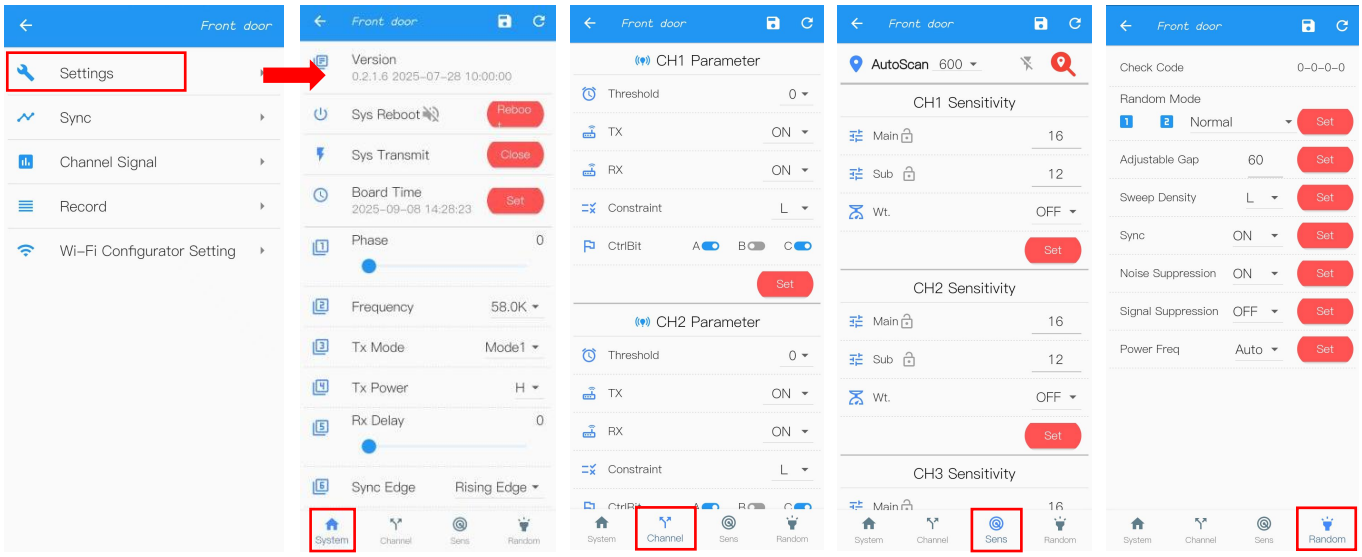
4. Return to the "Remote Mode" page, ① Click "Remote" → ② Click "Brand" → ③ Click "Store" → ④ Click "Device", you can view the information of the device.



Ⅲ. Tuning and set up the device

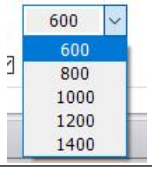
1. Settings

- System page: Set the system parameters of the motherboard
- Channel page: Set channel parameters
- Sensitivity page: Set sensitivity
- Random page: System random mode setting



System Page			
Parameter items	**Default parameters**	**Parameter range**	**Setting**
Phase	0	0~119	Setting the phase
Frequency	58K	57.8K/ 58K/ 58.2K/ 58.4K/ 58.6K	When the soft tag frequency deviates, select the corresponding frequency for matching
TX Mode	Mode 1	Mode 1/Mode 2/ Mode 3/Mode 4/Mode 5	Five modes are different software algorithms. Can be switched when the surrounding environment is poor. Currently, only Mode 1 to Mode 3 are available, as to Mode 4 and Mode 5,they are reserved for future use.
TX Power	H	H (High) / M (Middle) / L (Low)	No setup needed
RX Delay	0	0~100	No setup needed
Sync Edge	Rising Edge	Rising Edge/ Falling Edge	If the position of the live line and the neutral line are opposite, you can switch through the software, no need to manually switch. (the normal one is the left neutral line and the right live line.)
Jammer Detc	OFF	ON/OFF	Check whether there are irregular interference signals around. When an irregular signal is detected the antenna indicator light will"flash 4 times-pause-flash 4 times". To ensure good use, the interference source should be eliminated.
Tag Nearby Detc	OFF	OFF/ S/ M/ L S: Small tag; M: Medium tag; L: Large tag;	Detecting whether there is 58kHz labels or tags around the antenna that affects the antenna work: Select the tag size corresponding to the store (S/M/L). If a tag is detected around, the antenna will normally alarm for about 90s, and then loop "beep 2 times-pause-beep 2 times-pause" and the warning light will also flash with beep until the tag is removed.
Enh.	ON		To improves tag detection rates. When activated, the system will preprocess collected data and adjusts the valid data range. If poor distance stability or large deviation in repeated measurements occurs during on-site testing, try to disable this function for troubleshooting; if there is no improvement, please restore the default enabled state.
Function Keys:			
			System reset and restart. (with or without prompt sound)
			Click "Close", the system will enter close transmitter status.
			Refresh
			Save settings
Set			When change the parameters, click "Set"

Channel Page			
Item	**Default parameters**	**Parameter range**	**Setting**
Threshold	0	0~5	The higher the value, the higher the alarm threshold. When the field is prone to intermittent false alarms you can choose to increase the threshold. (When set threshold in software, make sure J107 main board is disconnected otherwise it will affect the software settings.)
TX	ON	ON/ OFF	Turn on or off the transmit
RX	ON	ON/ OFF	Turn on or off the receiver
Constraint	L	H/M/L/OFF	Constraint H/M/L/OFF four states. Higher grades result in greater system stability but reduced detection sensitivity
CtrlBit	A：ON B：OFF C：ON	A：ON/OFF B：ON/OFF C：ON/OFF	CtrlBit A, B, C two states: ON and OFF. When set to ON, the system achieves greater stability and generates fewer false alarms, but with reduced detection sensitivity.
Function Keys:			
			Click CH1/CH2/CH3 left buttons to locate antennas by alarm sound and light.
Sensitivity page			
Project	**Default parameters**	**Parameter range**	**Setting**
Main	16	1~16	The sensitivity of each channel is divided into two parts: the master board and the slave board. Each part has 16 levels of adjustment. The larger the value, the more sensitive the channel.
Sub	12	1~16	
Wt.	OFF	High（H）、Medium（M）、Low（L）	The weighting option is disabled by default and is suitable for improving detection in situations with high interference. After setting it, observe for several hours to ensure that there are not too many false alarms. The weighting is divided into three levels: High (H), Medium (M), and Low (L). Select the weighting based on the interference situation on site. The greater the interference, the higher the weighting should be.
Function Keys			
Auto Scan	In addition to manually setting channel sensitivity, software can also automatically scan to find the most suitable sensitivity combination. ➢ Synchronization check: Before using auto-scan, ensure that the device is synchronized with surrounding devices, otherwise it will affect the scanning results. If the surrounding noise is high at the current sensitivity, and a straight line appears when refreshing the phase and the surrounding phase cannot be determined, the sensitivity can be manually reduced to detect the environment more clearly and achieve synchronization. ➢ Environmental stability: The premise for auto-scan is that the environment is relatively stable and the interference should not be large or small at a quick changing, otherwise it may lead to inaccurate scanning results ➢ Sensitivity Lock: You can select the sensitivity value by selecting the LOCK at checkbox next to the		

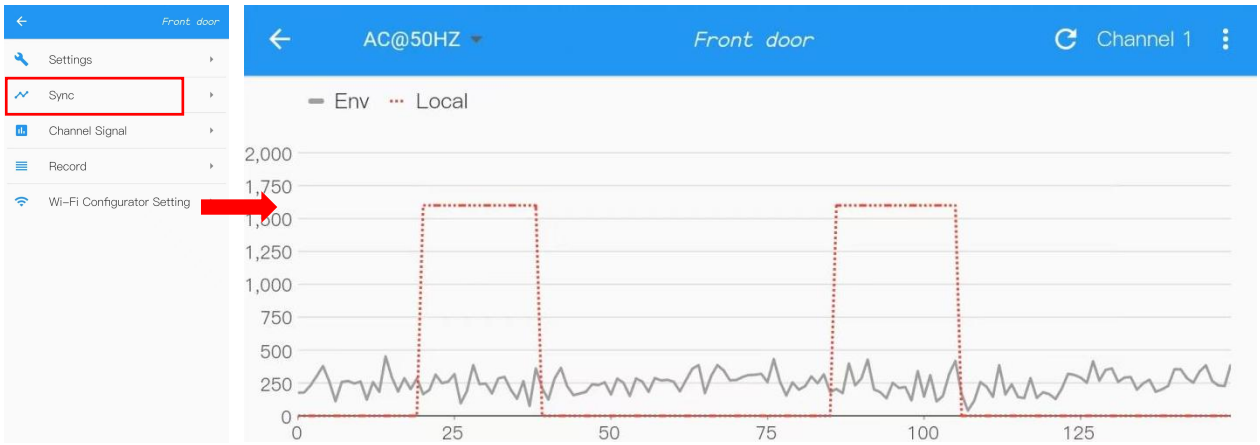
	sensitivity of the master or salve board of the channel. When auto-scan, the sensitivity of the locked part will remain unchanged. ➢ Result: After the auto-scan is completed, the system will display the best matching sensitivity combination. Users can manually adjust according to the actual effect. ➢ Signal level selection: The drop down menu above the scanning interference allows for the selection of channel signal level ,there are five options: 600、800、1000、1200、1400. When searching for the optimal channel sensitivity in the system, the larger selected value,the higher maximum level allowed by the channel, then the resulting channel sensitivity also will increases. If there is significant surrounding interference, it is recommended to increase the value appropriately before scanning. 
	Use with auto-scan function

Random Page	
Parameter items	**Setting**
Random Mode	Default: Normal; Optional: Adjustable,YS0, YS1-Adaptive,YS1-Enhanced,YS1-standard, L/N lrregular
Adjustable Gap	The setup could be done with the help of Lifangmei engineers
Sweep Density	The setup could be done with the help of Lifangmei engineers
Sync	Set under the help of Lifangmei Engineer.
Noise suppression	The setup could be done with the help of Lifangmei engineers
Signal Suppression	The setup could be done with the help of Lifangmei engineers
Power Freq	Select 50 Hz or 60 Hz according to the local voltage frequency. After selection, the system will not automatically detect the frequency. This function is used when the voltage frequency is unstable and causes system alarms, such as when shops are powered by UPS or generators. (only set for the case where the frequency jitter of electricity is not high. If the jitter is relatively high, normal power supply needs to be used.)
Function Key	
	Refresh
	Setting saving

2. Synchronization

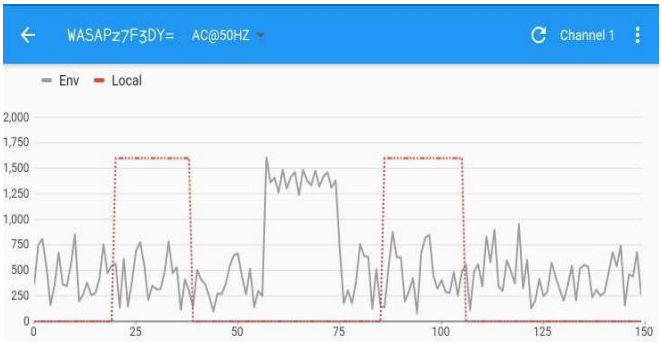
Used to check the environmental data and phase information around the antenna.

① Click "Sync" to enter the synchronization interface



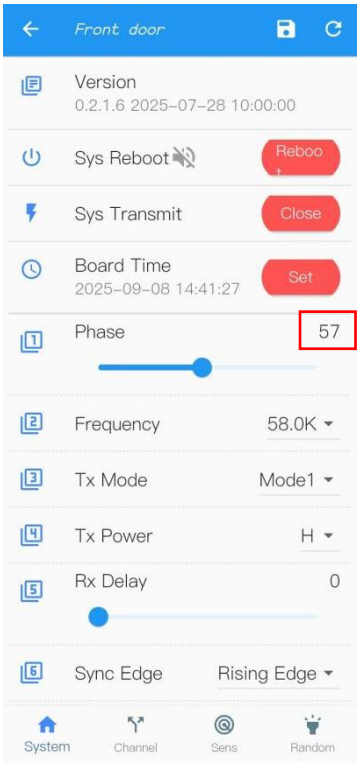
Environment	
Local	The red dashed box indicates the signal transmitted by this antenna.
Env	Grey block indicates environmental signal. Click the right edge line of the red box first, then click the right edge line of the gray box, the phase difference between this antenna and the external environment can be calculated.
Channel 1	Channel selection
Refresh	Select the corresponding phase channel and click "Refresh". The antenna will collect the surrounding environment data and upload it onto system synchronization. For the convenience of system synchronization, please select the channel with the best signal for tuning. If the channel signal interference is very severe, you can select one antenna, reduce its sensitivity, then check the phase. Restore it to its initial state after synchronization is completed again.

② As shown in the figure below, the red box represents the phase of Lifangmei and the gray box represents the phase of other devices. The two phases need to be synchronized.

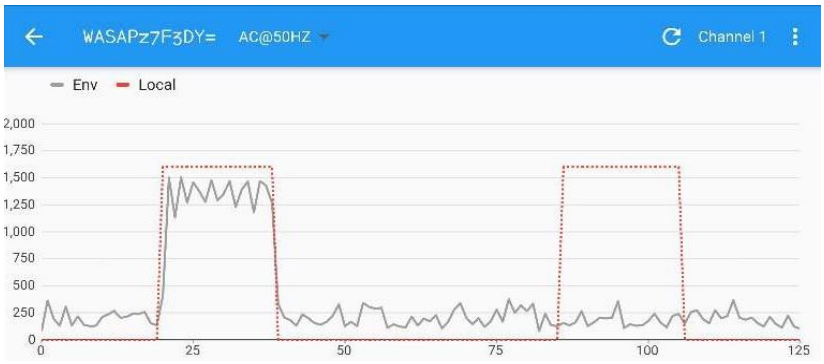


③ Click the point at the edge of the red box and the edge of the gray box, and measure the phase value. In the figure below, the phase value is 57.

④ Return and enter the "Settings" page, refresh first, then adjust the phase option to 57, which should be the same value as in the previous step, and finally click to save.

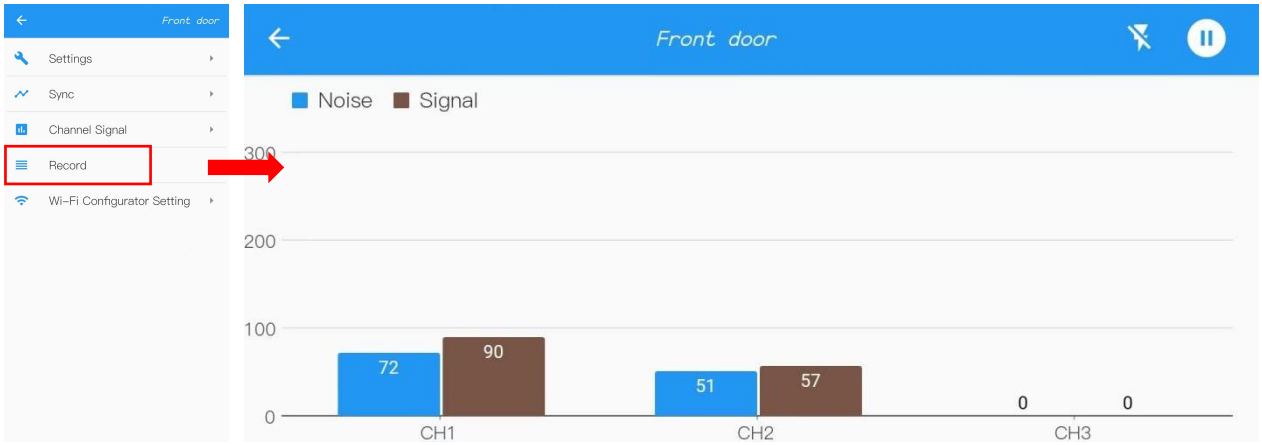


⑤ After synchronization is completed, the antenna will sound an alarm, indicating that the antenna adjustment is successful. Then return to the "Sync" option and enter again. If the gray frame is below the red frame, synchronization is complete.



3. Channel Signal

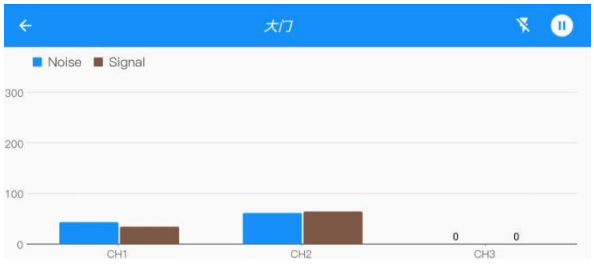
Click "Channel Signal" to view the channel noise and signal.



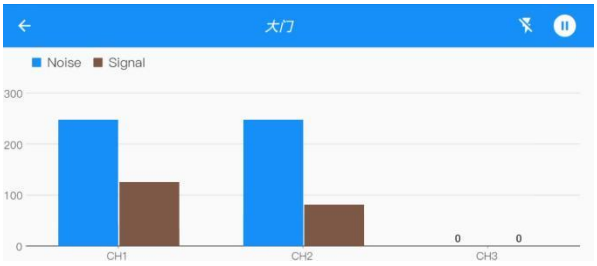
Channel Signal	
Noise	Surrounding noise.
Signal	Intensity of interference with the signal from surrounding noise.
TX ON	Used to detect tag signals: Determine whether there are tags around the antenna. After click TX ON, if you see the brown column suddenly rise, it means there are tags around.
Display	Click the "Display" button, the antenna will automatically upload the channel signal and surrounding noise. Note that label cannot be detected at this time.

- Channel Signal 1 indicates the device is unaffected by environmental interference;
- Channel Signal 2 indicates significant interference with a value of 250, where a high blue column represents unsynchronized phase;
- Channel Signal 3 shows a high brown column indicating tag interference in the vicinity;
- Channel Signal 4 shows equally high blue and brown columns, indicating either radiation interference or power conduction interference.

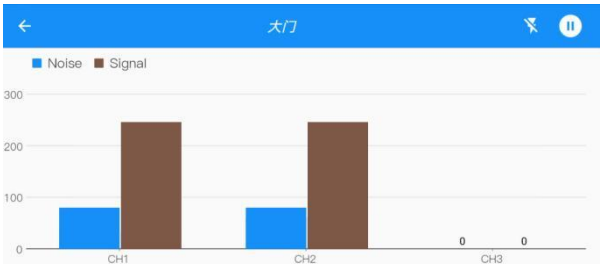
Channel Signal 1



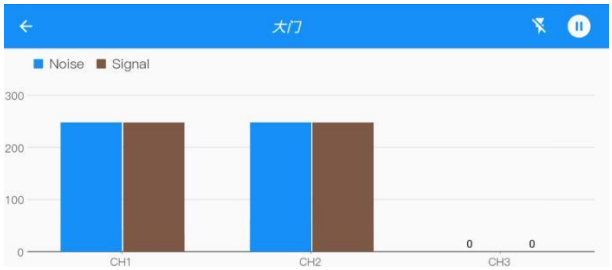
Channel Signal 2



Channel Signal 3

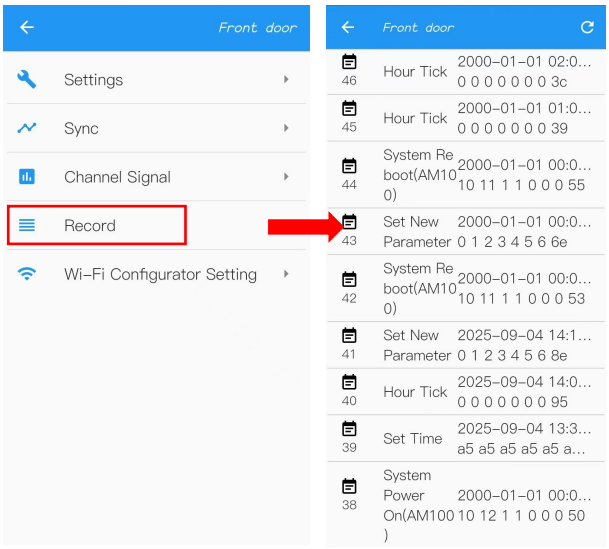


Channel Signal 4



4. Record

Can view the system alarm records and check the causes of alarms through this page.



Record Type	Note
CH1/CH2/CH3 Alarm	Corresponding signal antenna alarm records.
Hour Tick	When the system is powered on, a record is automatically generated every hour.
System Power On	The system is powered on normally. If this record appears consecutively for multiple times, check whether the power supply is normal.
Cyclus Error	Indicates that the frequency 50HZ and there is jitter, the frequency is unstable, and the power load is large. Power supply by a generator or UPS will probably both lead to this condition.
System Reboot	System reset
Set New Parameter	Changing the relevant parameter settings will automatically generate this record.

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