Mingtang Big Data Monitoring System Instructions

Intelligent Cloud BMS High Quality High Value

System Introduction

This system is an intelligent cloud BMS big data monitoring and management platform, its biggest feature is to bring together BMS big data analysis, remote control, GPS location tracking, air upgrade, real-time alarm, battery management, etc. The protection board transmits battery data to the cloud server through the network, and real-time analysis of the big data will remind the operator of abnormal batteries in a timely manner, and the platform supports single and multiple batteries hierarchically. The platform supports single and multiple battery hierarchical monitoring and management, and APP step by step, making the management of the battery safer and more effective.



Operator Login



Login Address:

https://bms.mtxnyjs.com/front/clocation/admin.html#/login Enter the operator account number and password to log in the platform . (Please contact commercial staff for account number and password)

01 home page

Home Features

Functions of the home screen are as follows: Alarm device of the day: display the alarm information of the day, click the relevant alarm block to view the alarm details

Top 5 customer equipment statistics: shows the number of batteries of the top 5

Equipment distribution map: shows the distribution of all batteries across the country

Device overview: shows total number of batteries, number offline, alarms

Equipment platform expiry overview: shows the expiry status of the equipment



Home Features

Functions of the home screen are as follows:

Language switching: Click on the "mini-map" icon in the upper right corner to switch languages.

Change password: Click on the account name in the upper right corner, expand the submenu to find "change password" to change.



02 Equipment management

2.1 Client List

All customers: show all the subordinate customers under the customer account, click the relevant account,

the right side will show the list of battery equipment under the account

Expired devices: show all expired or about to expire devices under the account

Offline devices: show all offline battery devices under the account, can show 1 hour, 1 day, 1 month and other time range of offline devices



2.2.1 Function Bar Description

The function bar includes some general functions, please tick the target device number before using these functions:

- 1. Transfer Device: This function allows you to transfer the ticked device to the target account.
- 2. Setting specifications: you can set specifications for the equipment (specifications need to be added in the "account management", see paragraph 6.1).
- 3. Renewal: When the device is out of date and cannot be brought online, you can select this function to renew the device.
- 4. Export device: you can batch export the ticked device number
- 5.Copy ID\BT code: can batch copy the current page ID or BT code
- 6. Column configuration: you can choose to display more list content as needed (Figure 2)

7. More:

- a. Transfer out of the battery: can transfer out the equipment number to other level customer account name
- b. Export QR code: you can batch export the QR code of the ticked devices
- c. Copy: can copy all ID numbers or BT codes of the current operator

BMS System	Сүү													🛨 Balan	nce : 0.00	(Coins) F	Recharge R	enewal Setting	gs 🔇 English 🗸 💄 CYY	Y ~
Home Device Manager	Location	IB	ms control	Analysi	Accoun	t										ID/T	tcode/Custon	ner	Device Ttcode Custon	ner
Customer List	All	Expire	d devices Offli	ne devices												Cu	ustom nan	ne: CYY	Number of Device:	121
Search Customers	Device I	List S	ubordinate custome	ers												Contac	cts: CYY	() Func	tion: App notification ala	arm
CYY(121/127) AD(2/2)		Online(0)	Tower Code	oled(41) Evoired(6	Mobile ph	one Ma	odel V	Specificatio	ons	V Q Se	rch Sul	oordinate		Copy PT c	ada Ca	lumo confic	Mara			
F TEST(24)		No.	ID ¢	Name	Model Lat	est online time	Positioning tir	string me s v \$	Battery t ype ∨ ≑	Rated Cu Vo rrent V	volta age ¢ √ :	ge d Nomina nce Capacity + × +	l soc y ∨ ≑	Number of cycles ∨ ≑	ode Co Mileage ∨ ≑	Battery s tatus V \$	Specifications	Charger m ode ∨ ≑	Actions Reset filter	
			513880880001 🗐	323880880001	GPS323 20	24-04-11 16:51	2024-04-11 16	:51 0	NCM	54	110 0.0	0 00	0	0	51.20	unused		Dedicated	BMS Location Info More	Â
			203466000996 🗐	BM3216000996	BM321										0.00				BMS Location Info More	
		3	203466000995 🗐	3216000995	BM321	0									0.00				BMS Location Info More	
		4 (🕽 203466000886 🗐	BM3216000886	BM321	0									0.00				BMS Location Info More	



List Item Display Filter	×
 Select All 	(2)
Latest online time	Positioning time
Strings	Battery type
Rated Current(A)	Voltage(V)
Voltage difference(V)	Nominal Capacity(AH)
✓ SOC(%)	Number of cycles
Mileage(KM)	Battery status
Specifications	Charger mode
Tower Code	API cabinet manufacturer
Cabinet subsystem	Cabinet network
485 handshake	485 Sleep
Charge Switch	Discharge Switch
Cell charge protect(mV)	Cell discharge protect(mV)
Defensive state	
	return

2.2.2 Function Bar Description

The function bar includes some general functions, please tick the target device number before using these functions:

- Batch command: you can set the device number in batch (see Figure 1 for details)
- a. Set tower code: can configure and batch set the tower code (see section 7.1 for details)
- b. Cabinet manufacturer settings: you can batch set the system preset cabinet manufacturers
- c. Setting BMS parameters: BMS parameters can be batch modified, such as: voltage, current, temperature protection value, nominal capacity, etc.

d. Agreement charging switch:

- On (represents that only cabinets with agreement can be charged)
- Off (represents that universal chargers can be used for charging)

e.485 sleep switch:

On (on behalf of the 485 sleep, can save power) Off (on behalf of the 485 does not sleep, always on)

- f. Buzzer can be set in batch (mute and un-mute, seek and
- un-seek)
- g. Setting mileage amplification: you can add mileage multiplier according to your needs
- h. Equipment scrapping: this function can be used when equipment is scrapped or not renewed, and the scrapped equipment will not appear in the renewal interface (see 7.2 for details).





List Item Display Filter	×
 Select All 	\bigcirc
Latest online time	Positioning time
Strings	Battery type
Rated Current(A)	Voltage(V)
Voltage difference(V)	Nominal Capacity(AH)
✓ soc(%)	Number of cycles
Mileage(KM)	 Battery status
Specifications	Charger mode
Tower Code	API cabinet manufacturer
Cabinet subsystem	Cabinet network
485 handshake	485 Sleep
Charge Switch	Discharge Switch
Cell charge protect(mV)	Cell discharge protect(mV)
Defensive state	
	return

2.3 Add Subordinate Customers

- To add a subordinate customer: click the "Add" button at the top right of the customer list (Figure 1).
- 2. Fill in customer information: Fill in the pop-up box with the information of the subordinate customer (Figure 2).
- **3. BMS control authority:**

Charge/discharge: whether the customer is authorised to have charge/discharge switching privileges or not BMS Setting Parameters: Whether to authorise the customer to have the right to modify BMS parameters (if both are unchecked, this account only has the right to view the BMS status).

BM	S System					
Home	e Device I	Manager				
🚨 Custo	omer List	Add				
Search (Customers	1				
 MTnev 	world(58/7011)					
► ABC	Cbattery(4125/4619)					×
Biso	onBattery(1625/212	5)	* Operator Name:	Operator Name	ID No.:	Please enter ID num
CYY	((121/127)	(1)	* Contacts:	Please enter the cont	Region:	Select \checkmark
Gala	axyBE(24/31)		Contact number:	Please enter the cont	Other:	Please enter QQ/em
	* Confirm Password:	Confirm login passw	Detailed address:	Please enter detailed address	5	
	Device control purview	BMS char and dischar	BMS set parameters	Single device function con	trol	
	Device list display	Select All				
		volt	soc 🔽	remaining capacity	🛛 nominal Capacity 📃 🗹	stand Current
		battery type	battery number	Voltage difference	online time	positioning time
		specifications	workState	charging switch	discharge switch	number of cycles
		Cell charge protect volta	Cell discharge protect vo	geefensive Status	mileage (kilometers)	charger mode
		tower code	cabinet system	network status	485 handshake	485 sleep
				delivery une		
	Batch command purview	Select All				
		battery type	bms set param	nominal Capacity	Low temperature heating	set mileage amplification
		device authority	scrap flag	buzzer 🛛	charger mode	tower code
		✓ cabinet system	✓ 485 sleep	Pre discharge	api cabt	
		2—	Confirm	Cancel		

2.4 Transferring equipment to lower tier customers

Transfer equipment to lower level customers:

Firstly, tick the equipment you want to transfer from the equipment list, then select "Transfer Equipment", then select the target customer from the customer list, and finally click "Confirm" (as below).

When finished, you can click the customer name from the left customer list to view the transferred devices.





2.5 Transferring batteries to other customers

After the battery is transferred to another customer account, the device number of the battery will be moved out of this account and you will lose the control of the battery, please be careful.

Firstly, tick the device number you want to transfer from the device list, then click "More", select "Battery Transfer", then enter the name and account number of the target customer, and finally click "Confirm". Only support Tier 1 operator to transfer out battery).



03 Positioning and monitoring

3.1 Position monitoring page

Figure 1: <All data> means that the map will show all device location icons of the operator, and <List data> means that the map will only show the device location icons in the operator's list.

Figure 2: <Get the number of devices in the visible area > Clicking on this button will display the number of devices in the visible area of the map, <Export devices > clicking on this button will export the information of devices in the area

Figure 3: < Device List> extended display area for more battery information, e.g. voltage, charge/discharge current, movement status, position, etc. (see 3.2 for details) Figure 4: < Alarm List> shortcut display area, you can view all the alarm information of this account, including viewing the battery curve at the time of the alarm, the type of

alarm, the number of alarms, the switching prompt sound, etc. (See 3.2 for details)



3.2 Device List and Alarm List Expansion Cards Introduction

- **Device List:** The content of device expansion card includes battery status (motion/static, charge/discharge current, SOC, etc.), location information, and you can export the data of the listed devices through the "Export to Excel" button.
- Alarm List: Alarm expansion card displays alarm information of this account and subordinate account devices (tick to show subordinate), you can tick "Enable Alarm Sound" to enable sound reminder, and you can cancel the display of unwanted alarm types through "Set Alarm Type".

Device L	.ist 🧿				All positions Export Excel 🤿 K
No.	ID	Customer	Latest online time	State O Charging O Discharging O Motion+Idle	position information
1	613881539718	MTnewworld	2024-08-12 14:55:54	Battery status: Static (Idle); current: 0A; SOC: 100%; Voltage: 79.690V;	Tamil NaduErode
2	013880894486	MTnewworld	2024-08-12 14:55:26	Battery status: Static (Idle); current: 0A; SOC: 41%; Voltage: 66.060V;	天津市天津市西青区杨柳青镇平安路
3	613881008200	MTnewworld	2024-08-12 14:55:38	Battery status: Static (Charging); current: 9.83A; SOC: 24%; Voltage: 50.180V;	广东省江门市开平市长沙街道曙光东路
4	013880894476	MTnewworld	2024-08-12 14:54:07	Battery status: Static (Idle); current: 0A; SOC: 34%; Voltage: 63.330V;	天津市天津市西青区杨柳青镇平安路
5	613881209707	MTnewworld	2024-08-12 14:55:45	Battery status: Static (Idle); current: 0A; SOC: 72%; Voltage: 53.380V;	广东省广州市黄埔区穂东街道西成中街

Alarm L	i st 59s	Enable alarm sound	Show subordinates Set a	larm type			Batch processing close window $\varkappa^{a} \varkappa^{c}$
	No.	ID	Alarm type	Number of alar ms	Processing status	Latest alarm time	Operate
	1	613880944566	Beyond electrFence	89	Unprocessed	2024-08-12 14:49:09	Curve chart alert handle
	2	613880921507	Beyond electrFence	89	Unprocessed	2024-08-12 14:49:09	Curve chart alert handle
	3	613881401360	Beyond electrFence	89	Unprocessed	2024-08-12 14:49:09	Curve chart alert handle
	4	613881107282	Beyond electrFence	88	Unprocessed	2024-08-12 14:49:09	Curve chart alert handle
	5	613881107336	Beyond electrFence	89	Unprocessed	2024-08-12 14:49:09	Curve chart alert handle

3.3 Bubble bubble box details

Example diagram of a positioning device

First line: device name GSM signal strength Second line: device number (click the right icon to copy) Third line: device status Fourth line: number of GPS satellites searched Fifth line: SOC power Sixth line: battery voltage Seventh line: discharge current Eighth line: charging current Ninth line: arming status Line 10: Time of the latest data uploaded by the device Line 11: Time of the latest positioning uploaded by the device BMS: Click to go to the IBms control page. Details: Basic information about the equipment

Trajectory: you can view the trajectory record of the device's operation

Command log: you can view the command log of the deviceCurve: You can view the battery curve of the device



3.4 Trajectory playback

- Click on "Tracks" in the bubble box on the map screen (small picture below).
- Enter the track page, in the left side of the setup area, select the date you need to query the track, playback speed, etc., after the configuration, click "load track" and then "play" that will automatically play the right side of the map in the movement track.
- In addition, you can click on the "speed" and "details" to view the specifics of the runtime (the following big picture).



3.5 Battery curves

 Click the "Curve" button in the bubble box Battery graph can view the real-time changes of voltage, SOC, current and temperature of the battery, and the right side of the interface displays the basic information of the battery and the voltage of a single string.



04 IBms Control

4.1 IBms control

IBms control is a battery BMS management system, the interface displays real-time data of the battery, including Soc, battery protection status, single string voltage, alarm status, battery graph, and current positioning position. (Figure below)

BMS Sys	BMS System 💱 MTnewworld 🖉 Due within 7 days: 0 🛓 Balance : 9: (Coins) Recharge Renewal Settings 🚱 English 🗸 🛓 m 🖂													
Home D	evice Manage	er Location	IBms cor	trol Analysi	Account			ID/Ttcode/Customer Device Ttcode Custom	ner					
Monitor Control	ID	Search	n Read	ID: 61(Device online	Update time: 2024-08-12 15:21	:45							
SOC:	49%]	Battery status: Idle SOE: 28.7 Ah Number of cycles:	9 195 Time	73.19 Voltage(V)	cur	0.35 0.026 rent(A) Power(kw)		Daily curve Battery voltage(V) Battery Temp1(°C) Protect board temp(°C) Remaining Capacity(%) Charge current(A) Discharge current(A) 100 100 100 100 100 100 100 10						
state					More »	Battery params	More »							
Battery type	NCM	Charge Switch	Open	Short Circuit Protect		Cell charge protect voltage	4350mV)mV 60						
Strings	20 strand	Discharge Switch	Open	Protect board temp	30.6°C	Cell charge recovery voltage	4325mV	5mV	49					
Nominal Capacity	60Ah	Charge current		Battery Temp1	24.3°C	Cell discharge protect voltage	2750mV							
Rated Current		Discharge current	0.35A	Battery Temp2	24.1°C	Cell discharge recovery voltage	3000mV							
Equalizer Switch	Open	Charge protect		Battery Temp3		Total charge protect voltage	87V	87V 24336						
Equalizer Status	Unbalanced	Discharge protect		Battery Temp4		Total charge recovery voltage	86.5V							
Equalizer Type	Automatic	Factory Date		Expiration Date	2025-04-24	Total discharge protect voltage	61V	61V -08-12 00:06:30 2024-08-12 09:58:16 2024-08-12 11:15:11 2024-08-12 12:26:38 2024-08-12 13:58:18						
Manufacturer code	563_SY_20	S_55A_BT20720602(Total discharge recovery voltage	62V	62V						
Battery cell stri	ing voltage: N #2 3.661V	lax volt: 3.664 V #3 3.661V	Min volt: 3.65 #4 3.662V	66 V Max differen #5 3.663V	nce: 0.008 V #6 3.663V	Alarm status	Alarm sta	arm statistics 》 百合和苑						
#7 3.664V	#8 3.663V	#9 3.664V	#10 3.656V	#11 3.657V	#12 3.659V	<u>ُ </u>		\mathbf{O}						
#13 3.657V	#14 3.657V	#15 3.658V	#16 3.658V	#17 3.659V	#18 3.658V]	No data		帝 <u>绝</u> 球蒙 种苗站						
#19 3.659V	#20 3.659V							和泰家园 古今明恭	s _*					

4.2 IBms control

Click on "Control" to set battery parameters.

BMS general: can modify the protection voltage, nominal capacity, equalisation switch, battery type, number of strings, etc.

BMS temperature: can modify the high and low temperature protection value and recovery value of the protection board BMS current: the protection value of the charging and discharging current of the protection board can be modified BMS control: remote control of battery charge/discharge switch, system restart, restore factory settings

Module commands: including protocol charging switch, tower number setting, cabinet manufacturer setting, cycle count setting, clearing track records, immediate positioning, vehicle search and other functions

Low power mode: you can set the low power mode according to the demand, there are different modes to choose, after selecting the low power mode, then enter the low power mode value can be (this function needs the corresponding software support)



Low-temperature heating: low-temperature heating can be switched on or off, and different heating parameters can be modified according to the requirements (this function requires the support of the corresponding software). Command Record: Command Record can be gueried

05 Statistical analyses

5.1 Statistical analyses

Statistical analyses are mainly functions such as alarm list, financial management, log management and operation statistics:

Alarm Management: Including all devices under the account of the abnormal alarm information (need to open the display of the next level), you can "set the alarm type" to cancel the relevant alarm type, after cancellation of the alarm will not appear in the alarm list.

Financial management: including income records of renewal share, consumption records, renewal equipment records

Log management: including account login and operation records

Operations management: including mileage management statistics for equipment

Electronic fence: electronic fence can be added to equipment in bulk (see 5.1 for details)

BMS System 🕎 MTnewworld Expired: 1898 🛨 Balance : 95 👘 ins). Recharge Renewal Settings 🚱 English ~ 🛓 m														glish 🗸 💄 m 🛛 🗸	
Home Device Manager	Locatio	'n	IBms	control	Analysi	Accour	nt						ID/Ttcode/Custom	er Device	Ttcode Customer
Search Customers	• A	Alarm I	_ist											Custom r	name: MTnewworld
 All(7010/7010) MTnewworld(57/7010) 		D/Tower	Code		Alarm typ	e	✓ Model	✓ Unprocessed ✓	Show subo	ordinates 🧲	O Se	arch Batch p	rocessing Export Copy ID		
		s	tart Date	- 1	End Date	Set ala	arm type								
		N	D.	ID	Alarm type	Number of alarms	Processing status	Latest alarm time	Model	Strings	Battery ty pe	Rated Curre nt(A)	Tower Code	Alarm nun	Operate
			613	3881310513	single underVoltP rot	2	Unprocessed	2024-08-12 15:22:58	BM562	21	NCM	100	mtxnyyyds1310513	BJ2024081215160(Tag processing
Alarm Management		2	613	3880944566	Beyond electrFe nce	92	Unprocessed	2024-08-12 15:19:10	BM321	13	NCM	55		BJ2024081200090{	Tag processing curve
Financial Management ^		3	613	3880921507	Beyond electrFe nce	92	Unprocessed	2024-08-12 15:19:10	BM321	20	NCM	55		BJ2024081200090{	Tag processing curve
Revenue Record		4	613	3881401360	Beyond electrFe nce	92	Unprocessed	2024-08-12 15:19:10	BM563	20	NCM	55		BJ2024081200090{	Tag processing curve
Consumption records		5	i 613	3881107282	Beyond electrFe nce	91	Unprocessed	2024-08-12 15:19:10	BM563	20	NCM	55		BJ2024081200090{	Tag processing curve
Renewal Device Record		6	613	3881107336	Beyond electrFe nce	92	Unprocessed	2024-08-12 15:19:10	BM563	20	NCM	55		BJ20240812000905	Tag processing curve
		7	013	3880894476	Beyond electrFe nce	92	Unprocessed	2024-08-12 15:19:10	BM121	17	NCM			BJ20240812000905	Tag processing curve
& Operation Management		8	613	3881008200	Beyond electrFe nce	84	Unprocessed	2024-08-12 15:19:10	BM312	14	NCM	55		BJ2024081200090	Tag processing curve
LIECTronic Fence		9	613	3880881075	Beyond electrFe nce		Unprocessed	2024-08-12 15:19:10	BM321	13	NCM	35		BJ2024081214590	Tag processing curve
		1	0 613	3881310513	Beyond electrFe nce		Unprocessed	2024-08-12 15:19:10	BM562	21	NCM	100	mtxnyyyds1310513	BJ2024081215191(Tag processing curve
	e i	-													Tag processing
	Tota	al 248	100/pag	ge 🗸 <	1 2 :	3	Go to 1								Alarm List 27s 🖉

5.2 Electronic fencing

Electronic fence: support batch devices to add fences, when the battery exceeds the fence, the system will send an alarm to remind

- 1. According to the following figure, add the fence and add the device number in turn, you can batch copy the device number to add electronic fence
- 2. Clicking and pulling the dark dots on the edge of the fence will automatically add 2 new dots to refine the shape of the fence.
- 3. You can only add the device number under this account, and the APP will be automatically synchronised after setting up the e-fence
- 4. The new fence created by this account can only be deleted by this account.



06 Account Number Management

6.1 Account Management

The main functions of account management are account adding and battery specification setting, which are described as follows:

Account management: according to Figure 1 sequential operation, add a spare account, you can create a number of spare accounts for multiple people to use (the same account allows only one person to log in)

Device specification setting: Operate according to Figure 2 in order to add or edit the battery specification, after completion, you can select the battery specification for the device number in the [Device Management] page.





07 Important Features

7.1 How to configure and set the tower code:

From [Device Management], select [Batch Command] and then select [Set Tower Code] to configure the code, there are two ways to configure: Method 1 is the regular 24-bit code configuration, Method 2 is through the "File Import", download the template, fill in the template with the device number and the corresponding tower code and then import it in (Method 2 is mainly for special). (Method 2 is mainly used for special codes)



7.2 How to scrap equipment:

After the equipment number is scrapped, it will no longer appear in the renewal interface, in order to avoid incorrect renewal, after the protection plate is scrapped, please carry out the scrapping operation on the platform in a timely manner



Completion Thanks for the support