## Hi-Checker User Manual

## **PC** Software

Thank you for choosing our company's commercial air conditioner.To ensure the correct use of Hi-Checker, please read this manual and <Hi-Checker User Guide> carefully before use. Please keep it after reading. Should you have any question, please contact the dealer or our company's service center.

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## Preface

This product is a general-purpose control product. Product features require air

- conditioning system support, Connecting with some certain types of air conditioners may void part of the functions indicated in this manual.
- Do not use this product in the following places where the product is prone to fail.

Steamy places, or places where oil(including machinery oil)sprays; Places, such as hot spring, with high concentration of sulphide gases; Places where flammable gas may generate or flow; Coastal areas with high salinity; Places with high acidity or alkalinity.

When using medical device and other devices

that produce electromagnetic waves, the transmitting surface of electromagentic wave shall not face this product directly to avoid mis-operation.

In addition, in order to prevent electromagnetic waves propagating in the air from affecting the air conditioner. Please place equipment that can generate electromagnetic waves, radio transmitters, etc., at a distance of 3m away from the product.

#### Marning: Indicates mis-operation may reuslt in · Indicates issues need attention Attention serious injury or death. shortcut · Helps to facilitate your operation. Indicates prohibited items. Indicates mandatory items, and provides guidance to the actions of unspecified general users. Safety Tips

### Meaning of the symbol

- Please read this chapter before using the product.
- Items need attention are categorized into [ A Warning] . [ A Warning] indicates items that may lead to severe consequences due to improper installation. It is a must to obey the requirments.
- After reading, please keep this manual in a safe place for reference at any time.

	lr	nstallation . Electrical construction
<u>∧</u> Warning	•	Installation shall be performed in strict accordance with this manual and by the professionals designated by our company. Otherwise, it may lead to electric shock or falling, and a fire may break out.
	٠	Electrical constructors or entrusted distributors shall be qualified for construction. Otherwise it may lead to electric shock or a fire.

# Safety Tips

	Equipment Wiring
Â	Do not connect the communication terminal of Hi-Checker to a high-voltage power supply.
Warning	<ul> <li>Please ensure that the alligator clip of the communication cable is clamped on the communication terminal of the air conditioner.</li> </ul>
	<ul> <li>When using the power adapter to power the Hi-Checker device, please ensure a specification of 5V === 500mA.</li> </ul>

	In operation
	Waterproof measures should be taken when using Hi-Checker device. Please pay • attention to check the dial code before use, and refer to the <hi-checker guide="" user="">.</hi-checker>
Warning	When an abnormality (burnt smell, etc.) occurs, immediately stop the operation and cut off the main power supply. Operating under abnormal conditions may cause malfunctions, electric shocks, fires and other accidents. Please contact the dealer or our company's designated service center.

## Preset

#### **1** Port Configuration

Hi-Checker's PC software can be used after decompression. Connect device and air conditioner, plug the Hi-Checker device into the computer, the port number of the device can be queried from the device manager. Select the port number in the "Options" menu in the PC software. If the communication is normal, the communication status light of the computer software will change from red to green, or will prompt "The communication port is not detected, please check or re-insert the communication port, the system will automatically detect it after insertion", All functions are usable except data collection.

## Preset

#### 2 PC software function configuration

PC software supports its own system language switching. The switching range is: Chinese, English, Italian, Spanish, Russian, French, German, Turkish, Polish, Thai, Vietnamese, Arabic in total 12 languages, and supports the conversion of units between metric and imperial. Click the "Options" button in the upper right corner of the PC software to pop up the "Option" dialog box. Click the "Activate" button to activate specific functions. This activation is only valid for the Grab Communication function. If the function is not needed and the activation can be passed. For specific activation methods, please consult customer service or local dealers.



Fig1 Sketch map of Activate function

- 1: System language switch;
- 2: Unit switch;
- 3: Select the port, view the software version number and activation function;

0 Attention 

- If the Grab Communication function is not needed, there is no need to activate the PC software.
- If the computer cannot recognize the port number of the device, Please search the description file named CDC\_Demo.inf in Software installation directory "\*\*\* \Hi-Checker\Data", update the device port driver to the description file will do.

#### **1** Preparation for data collection

First connect the Hi-Checker device and PC via USB, Connect Hi-Checker device and air conditioner through communication line. Wiring is shown in Figure 2. Open the PC software, When the PC software establishes a connection with Hi-Checker (the status light in the upper left corner changes from red to green), Then click the data collection menu item in the function bar on the left side of the main interface.



Fig3 Schematic Diagram of Collection Entry

Enter the data collection setting interface. On this page, user can set the file name, save path, and whether to use the control function. After setting, click the "Sure" button to enter the air conditioner searching interface.

HI-CHECKER V0.6.36		2021/08/17 18:37:42	En v U	Init Options	- 🗆 ×
windown of the second	Obtain project hame project 1 Stored folder C:\CHECKERTEST\ 3			Sure	← Back
	<ul> <li>Use control function</li> <li>Attention:         <ul> <li>Connect Hi-Checker to the transmission terminal for the Homebus in the air con</li> <li>Connect this computer to Hi-Checker with the USB cable.</li> <li>Close other applications as those could be potentially interfering to the operation</li> <li>Press the Sure button after completing the above steps.</li> </ul> </li> </ul>	uditioners. an of this software.			

Fig4 Schematic Diagram of Data Collection Setting

- 1: Enter the name of the data collection project;
- 2: Select the working directory for data storage;
- 3: Choose whether to use the control function;

HI-CHECKER V0.6.36					2021/08/17 18:39:42	En	<ul> <li>✓ Unit</li> </ul>	Options – 🗆 🗙
.llu Data Collection ⊖ File Loading I CSV Conversion I Unit Information ⇔ Firmware Update	Start time18:38:0	06 Cost time00:0	1:19 Status:Get Onlin initialization	tion progress: 10 %	Initialization		0	Sure  ← Exit
Load Memory Card				conn	actions setting up			
፼ Code Information	System No. (0-6	63)		Com	county setting up			
Grab Comm.	0	E 1	2	3	4	5	6	□ 7
	8	9	10	□ 11	□ 12	□ 13	□ 14	□ 15
	16	17	18	□ 19	□ 20	21	22	23
	24	25	26	27	28	29	30	□ 31
	□ 32	33	□ 34	□ 35	□ 36	37	38	□ 39
	□ 40	41	42	43	□ 44	<b>4</b> 5	46	47
	48	49	50	51	52	53	54	55
	56	57	<b>58</b>	59	60	61	62	63
	Select all svs	Stems Check th	e system searched o	r add all systems				

Fig5 Schematic Diagram of Data Collection Initialization

- 1: Display air conditioner search status;
- 2: Display air conditioner search progress ;

In the initialization page of Fig5, Hi-Checker will continue to search for air conditioners. Depending on the number of air-conditioning connections, searching will last for 4-20 minutes. During this period the number or the fixed parameters of air conditioners need to be adjusted, the "Interrupt Initialization" button should be clicked first, then click the "Check Reconnect" button to conduct a new round of search for air conditioners . The air conditioner search completion interface is as shown in the figure below:

HI-CHECKER V0.0.50	~~				2021/08/17 18:42:2	7 En	<ul> <li>Unit</li> </ul>	Options — 🗖					
Data Collection	Checker I	D:0					0	) Sure 🔶 Exit					
File Loading		Initialization											
CSV Conversion	Start time18:3	Start time18:38:06 Cost time00:03:09 Status:Get Into Normal Control Status.											
Unit Information		1	Intelation	100									
Firmware Update	Check and reco	nnection	ot initialization	auon progress: 100	%								
Load Memory Card				con	nections setting up								
ode Information	System No. (0-63)												
🖸 Grab Comm.	0	□ 1			×	5	6	2 7					
	8	9	Hi checker initializatio	on completed, please select	the system to use	□ 13	14	□ 15					
	16	17			确定	21	22	23					
	□ 24	□ 25	□ 26	27	28	29	30	31					
	32	33	□ 34	35	□ 36	37	38	39					
	40	41	42	43	□ 44	. 45	46	47					
	48	□ 49	□ 50	51	52	53	54	55					
				-	-	- cd	- CO						

Please select at least 1 system for data collection. After checking the target system number, click the "Sure" button to enter the next page. Use the "Select All Systems" button to complete the operation with one key, it should be noted here that if the system number is not selected, the next page cannot be entered .

HI-CHECKER V0.6.36	<				2021/08/17 18:53:19	En v	Unit Opt	ions – 🗆 X				
,∥ii Data Collection	Checker ID:0						Sur	e  ← Exit				
O File Loading		_		ļr	nitialization							
CSV Conversion	Start time18:48:27	Start time18:48:27 Cost time00:03:24 Status:Get Into Normal Control Status.										
E Unit Information	Check and reconnectio	n interrupt initia	lization Initialization	progress: 100 %								
A Firmware Update							1.5.1					
Load Memory Card	connections setting up											
☐ Code Information	System No. (0-63)											
Grab Comm.	☑ 0	□ 1	2	3	□ 4	5	6	7				
	8	9	☑ 10	11	□ 12	□ 13	14	15				
	16	17	18	19	□ 20	21	22	23				
	24	□ 25	26	27	□ 28	29	□ 30	31				
	32	□ 33	34	35	□ 36	□ 37	38	39				
	□ 40	L 41	42	43	□ 44	45	46	47				
	48	49	50	51	52	53	54	55				
	56	57	58	59	60	61	62	63				
	Select all systems	Check the sys	stem searched or add	all systems				,				

Fig7 Schematic Diagram for System Number Selection of Data Collection

Please select at least 1 system for data collection, after checking the target system number, click the "Sure" button to enter the next page. Here user can use the "Select All Systems" button to complete the operation with one click, It should be noted here that if user do not select the system number, you cannot enter the next page. After the collection parameters are set, click the "Sure" button to enter the data collection homepage.

HI-CHECKER V0.6.36	~	2021/08/17 18:53:54	En v Unit Options – 🗆 X
.⊪Data Collection C File Loading IIII CSV Conversion	Checker ID: 0 Select for the folder to store the tenstered loss C:\CHECKERTEST\project1		⊘ Sure  ← Back
i≡ Unit Information ⇔ Firmware Update I Load Memory Card I Code Information	Storage interval 2 5 second (Available setting range: 5-864009 Spare disk space: 186.87GB GB/238.05GB GB	5)	
≕ Grab Comm.	Storage restrictions Open MByte:1024 Alarm Trigger		
	Open Specified alarm code		

Fig8 Schematic Diagram of Data collection setup

- 1: Display the current data storage directory;
- 2: Set the data storage interval. The shorter the interval, the higher the sampling frequency and the larger the data storage;
- 3: Set the hard disk storage threshold. If the threshold is exceeded, no data will be stored;
- 4: Specify the alarm code that requires special reminders. If an alarm is encountered during the acquisition process, it will be highlighted at the alarm position;

					2021/00/17 10/54:20	En	v Unit Ontic	
• IN-CITECKER V0.0.50					2021/08/17 18:54:20	Ch	- Onit Optic	
.⊪Data Collection	Checker ID	:0						← Exit
Data Recorder	C							
Data List	Connection S	tatus						
Data Graph	☑ 0	1	2	□ 3	4	<b>6</b>	6	7
Change Obtaining Sys	. 🗖 8	9*	✓ 10	□° 11,	12	<b>I</b> 13	14	15
Systemic Circulation	16	17	18	19	20	21	22	23
O File Loading	24	25	26	27	28	29	30	31
	32	33	34	35	36	37	38	39
i≡ Unit Information	40	41	42	43	44	45	46	47
Firmware Update	48	49	50	51	52	53	54	55
Load Memory Card	56	57	58	59	60	61	62	63
☑ Code Information								
⊡ Grab Comm.								

Fig9 Schematic Diagram of the Data Collection Homepage

After entering the main page of data collection, the secondary menu under this function will be expanded for users to view.

#### 2 Data recording function

HI-CHECKER V0.6.36     «		1/	1	V-2	2021/08/	17 19:00:17	En ~	Unit	Options – [	- X
<b>鼬Data Collection</b> Data Recorder Data List Data Graph	Checker ID:0	System NO Display Se	D.: 0 v		W.M	Address	NO.: 0 •	Go	← I Updat	Back ing
Change Obtaining Sys	Date	Time	ALMtime	RomNo.	Model_MARK	Production number	Capability code	DEMAND func	RUN State	Cycl
Systemic Circulation	2021/08/17	18:59:40	00:00:00	O-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	cc^
C File Loading	2021/08/17	18:59:35	00:00:00	O-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	CC
I CSV Conversion	2021/08/17	18:59:30	00:00:00	O-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	СС
I≣ Unit Information	2021/08/17	18:59:24	00:00:00	O-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	СС
⇔Firmware Update	2021/08/17	18:59: <mark>1</mark> 9	00:00:00	O-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	СС
I oad Memory Card	2021/08/17	18:59: <mark>1</mark> 4	00:00:00	O-91	YTOH080VPEMCQ	Н	16	Standard	TH OFF	CC
Code Information	2021/08/17	18:59:09	00:00:00	O-91	YTOH080VPEMCQ	Н	16	Standard	TH OFF	сс
	2021/08/17	18:59:03	00:00:00	O-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	СС
Grab Comm.	2021/08/17	18:58:58	00:00:00	0-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	СС
	2021/08/17	18:58:53	00:00:00	O-91	YTOH080VPEMCQ	н.,	16	Standard	TH OFF	сс
	2021/08/17	18:58:48	00:00:00	O-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	СС
	2021/08/17	18:58: <mark>4</mark> 3	00:00:00	O-91	YTOH080VPEMCQ	н	16	Standard	TH OFF	cc
	<	(A 50 A7	** ** **	• • •			9.a.	<b>a</b> i i i	THOPP	>~

Fig10 Data Collection -Data Recording Function Dagram

- 1: System number of current collection target;
- 2: Equipment type of current collection target;
- 3: Address number of the collection target;
- 4: Entry of system connection status;
- 5: Entry of parameter display setting;

Under this function, you can view all the operating parameters of a certain air conditioner horizontally, and update it row by row as the data is updated. Through the device type, the system number and address number of the collection target data can be accurately located, and the switching of the viewing target can be realized by switching the system number and address number. The switching range of the system number here is related to selected system in Fig7, and the display switching can only be performed in the selected system.

After the "connection status display" button is clicked, all air-conditioning connection status information searched by the Hi-Checker device will pop up, which is convenient for users to view the system and address numbers of all online indoor and outdoor units.

After the "Display Settings" button is clicked to enter, the user can set the state of the parameter display. Parameters do not need attention can be set to "OFF", which is easier to view after returning to the data record page.

#### 2 Data recording function



Fig11 Schematic Diagram of the Connection Status

HI-CHECKER V0.6.36     «		2021/08/17 19:01:40 En • Unit Options – 🗆 🗙					
"իի Data Collection	Checker ID:0 ODU IDU W.M	← Back					
Data Recorder							
Data List	Data display	Ref.No.					
Data Graph	ON	Model_MARK					
Change Obtaining Sys	ON	ROMNo.					
Operation control	ON	Production number					
Systemic Circulation	ON .	Model code					
O File Loading	ON	Canability code					
CSV Conversion	ON	DEMAND func					
I≡ Unit Information		DUN Chata					
Load Memory Card							
Code Information	UN	DEFROST Prepare					
- Grab Comm.	ON	Test Run					
L of the optimite	ON	Emergency Run					
	ON	Pro.Level					
	ON	Pro.Code					
	ON	C11					
	ON	C13					
	ON	C15					

Fig12 Schematic diagram of Display settings page

#### **3Data list function**

<ul> <li>HI-CHECKER V0.6.36</li> <li>«</li> </ul>					2021/08/17 19:24	:39 En	Unit Opt	tions – 🗆 X
Data Collection	Checker	ID:0 Sys	tem NO.:0 ×	ODU IDU	W.M			<b> ←</b> Back
Data Recorder Data List	Connection	Status	ter Specificatior	Page Time:2021/08/17 18	:55:26 K K	355/355	> >	Go
Data Graph Change Obtaining Sys	Pro.Level	No Protection	No Protection	Rmt.Cont	yes	yes	yes	yes
Operation control	Pro.Code	P00	P00	ManuFac No.	000000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000
Systemic Circulation	TdSH	45	<mark>5</mark> 1	M_Sys No.	0	0	0	0
File Loading	Pd	1.86	0	M_Unit No.	8	9	12	13
CSV Conversion	Ps	0.63	0	Air	High Fan	High Fan	-	High Fan
Unit Information	Pdo	2.37	0	Run/Stop	Run	Run	Stop	Run
Cine montation	Demand Hz	0	0	Filter	Normal	Normal	Normal	Normal
Primware Opdate	H1	0	0	Normal Run/Test Run	Normal	Normal	Normal	Normal
Load Memory Card	H2	0	0	Ts	20	19	21	20
Code Information	Та	11	0	Tsh	0.0	0.0	0.0	0.0
Grab Comm.	TS	-19	0	Run Mode	Auto	Auto	Auto	Auto
	TBg	16	0	Op1	Off	Off -	Off	Off
	Tchg	11	0	Op2	Off	Off	Off	Off
	Tdave_slv	77	0	✓ Ор3	Off	Off	Off	Off
	<		>	<				>

Fig13 Data Collection -Schematic diagram of data List

Under this function, you can view the current latest operating parameters of all indoor and outdoor units in a system longitudinally, which is convenient for users to compare unit data horizontally. Under this function, only one system's parameters can be displayed, so only system number can be selected and switched. The "connection status display" function under this function is consistent with the data record. After entering the "parameter explanation" button, a detailed explanation of all the parameters of the unit will be presented in the form of a pop-up window.

~~		10 F	Parameter Specific	ation			×			
h Data Collection	Checker	ID:0		ODU		IDU	~			← Back
Data Recorder			Parameter	Specification	Parameter	Specification				
Data List	Connection	Status Pa	Pd	High Pressure	Ts Adj	Setting Temperature Adj			> >	Go
Data Graph			Ps	Low Pressure	Tg	Heat Exchanger Gas Te				
Change Obtaining Sys	Pro.Level	No Protectic	Та	Outdoor Temperature	Tr	Remote Sensor Temper		5	es	yes
Operation control	Pro.Code	P00	TS	Sub-Cooler bypass outl	ТІ	Heat Exchanger Liquid	0	0000 0	000000000000000000000000000000000000000	000000000000000000000000000000000000000
Systemic Circulation	TdSH	45	TBg	Condensate Depression	То	Discharge air temperature		(		0
File Loading	Pd	1.86	Tchg	Plate-type Heat Exchan	ті	Intake air temperature		1	2	13
CSV Conversion	Ps	0.63	Tdave_slv	Average Temperature of	Fd	Requested Frequency		-		High Fan
Unit Information	Pdo	2.37	Tdo_slv	Target Temperature of I	ALM	Alarm Code		\$	Stop	Run
Eirmwara Undata	Demand Hz	0	Demand Hz	Target Frequency of Inv	d1	Unit Stop Reason		1	lormal	Normal
Pirmware Opdate	H1	0	INV1 A1	Primary Current Value o	iE	Exp. Value Opening		1	lormal	Normal
Load Memory Card	H2	0	INV2 A1	Primary Current Value o	Rmt.Cont	Remote control connection		2	1	20
Code Information	Та	11	i1ROM No	ROMNo Of Invert 1	M Sys No	The Master Indoor Unit's		(	0.0	0.0
Grab Comm.	TS	-19	I2ROM No	ROMNo Of Invert 2	M Unit No	The Master Indoor Unit's		+	suto	Auto
	TBg	16	En	Fan Air Tan	On1	Room Thermostart		(	Off	Off
	Tchg	11	EVB	Bynass Eyn V Opening	0n2	Cancellation of Heating		(	The	Off
	Tdave_slv	77	100	Dipase Exp. V Opening	0.0	Ut Dested	~	(	Off	Off

Fig14 Schematic Diagram of Parameter Explanation

#### **3 Data list function**

Under this function, the water module is an independent type of air conditioning equipment, and its parameters can be displayed separately. At present the types of water modules supported by Hi-Checker are:

(1) Split water module;

#### **4 Data Chart Function**

Under this function, you can view the operating parameter curve of one air conditioner. It is convenient for the user to view the change of the unit parameters. The "connection status display" button under this function is consistent with the data record. When entering this function for the first time, user needs to enter the curve setting page through the "Display Setting" button, after selecting the displayed parameter and setting the display color of the parameter, it can be displayed normally after returning to the chart page.



Fig15 Schematic Diagram of Data Chart Page

• 1: Parameter curve setting entrance;

<ul> <li>HI-CHECKER V0.6.36</li> <li></li> </ul>	4					2021/08/17 19:26:37	En 👻 Unit Options — 🗆 🗙
. <mark>⊪</mark> Data Collection							
Data Recorder	Checker ID:0			ODU	IDU W.M		⊘ Sure
Data List							
Data Graph	L.	140	OFF	22	outDoor	20X1	Remaining num of Display line graph 13
Change Obtaining Sys	1	$\sum_{i=1}^{n}$	OFF	23	outDoor	20X2	Remaining num. of Displayable 8 ON/OFF graph
Operation control		ON	-	24	outDoor	Pd	on on rightput
Systemic Circulation		ON	2	25	outDoor	Ps	Select for graph color
➔ File Loading		OFF		26	outDoor	Та	
CSV Conversion		OFF	8	27	outDoor	TS	
≡ Unit Information		OFF	-	27	outDoor	ТВд	
ຈFirmware Update		ON		28	outDoor	Teng	
Load Memory Card		OFF	-	29	outDoor	Tdave_slv	
젤 Code Information		OFF	-	30	outDoor	Tdo_slv	<u>2</u>
Grab Comm.		OFF	~	31	outDoor	Demand Hz	
		ON	- 2	32	outDoor	INV1 A1	
		OFF		33	outDoor	INV2 A1	
		628	8	34	outDoor	I1ROM No	
		(*)	-	35	outDoor	I2ROM No	
		OFF		36	outDoor	Fo	

Fig16 Schematic Diagram of Curve Setting Page

### **4 Data Chart Function**

- 1: Switch setting of Data Curve Display;
- 2: Color setting of Data curve;

HI-CHECKER V0.6.36     «				2021/0	8/17 19:29:21	En	<ul> <li>Unit</li> </ul>	Options -
<b>ilii Data Collection</b> Data Recorder Data List Data Graph	Checker ID:0 Connection Status	System NO.0 × Display Setting	ODU IDU Print	w.m	Address NO.:0	¥ ∂~409(409)	> >	← Ba
Change Obtaining Sys Operation control Systemic Circulation	12 10 8	· · · · · · · · ·				· · · · ·	Electric current:A Frequency:Hz	Voltage:V Valve opening:%
■CSV Conversion ■Unit Information PFirmware Update ■ Load Memory Card ■ Code Information	0 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0	56,055,065,048,045,045,045,0 9,059,049,049,045,045,045,045,045,045,045,045,045,045	الله المراجع ال n Emergency Run	19 <sup>12</sup> 91 <sup>12</sup> 91 <sup>12</sup> 91	12.15 are group of the	6.92 <sup>6,62</sup> ,92 <sup>06</sup>	Type Test Run Emergency Run C11 Pd Ps	Data           OFF           OFF           OFF           1.86           0.63
Sorab Comm.	ON -						Tchg INV1 A1 INV2 A1 Fo EVB	11 0 0 0 0

Fig17 Schematic Diagram of Curve Display Page

In this display page, the displayed parameter curves are all from the parameters checked as "ON" on the setting page, and the colors of the curve display all come from the colors selected by the user on the setting page.

#### **5 Operation Control Function**

Under this function, the user must check "Use control function" in the initialization interface to enter the operation control page, three types of controlled objects: outdoor units, indoor units, and water modules.

HI-CHECKER V0.6.36		2021/08/17 19:30:10	En · Unit Options - 🗆 🗙
≪ . <b>.ll⊔Data Collection</b> Data Recorder Data List	Checker ID:0 System NO.:0 · OD Connection Status Globa	Address NO.:0 ~	← Back
Change Obtaining Sys Operation control Systemic Circulation	Available Settings	Current Settings Standard v	
Grine Loading     Coversion     EUnit Information     A Firmware Update     Load Memory Card     Code Information	Operation	ChangeSetting	
⊡Grab Comm.			

Fig18 Operation control -Schematic Diagram of Outdoor Unit

- 1: Choose how to set control commands ;
- 2: Select the type of controlled object;

Under this function, you can select global settings and local settings. The global means to modify the present operating status of all outdoor/indoor units/water modules in the system, and the local means to set control commands based on the selected system and address number of one air conditioner. When individually controlling an air conditioner, be sure to select "Local Settings". Select the system and address number to switch the controlled air conditioner.

#### **5 Operation Control Function**

« 						
Data Collection	Checker ID:0	System NO.:0 * OD	U IDU W.M	Address NO.:8	v	← Ba
Data Recorder Data List	Connection Status	Global Setting 💿 Individ	dual Seting			
Data Graph	Available Settings		Current Sett	ings		Remote forbidden
Change Obtaining Sys	Switch					
Operation control Systemic Circulation	TS					
File Loading	Run Mode	Cool	Heat Wind	Wet	<ul> <li>Auto Mode</li> </ul>	
Unit Information	Wind Speed	Super High H	High Mid	Mid-Low	Low	
Code Information	Dflector	2				
Jorab Comm.	Option	Clear Option				
	Operation	Change Setting				

#### Fig19 Operation control -Schematic Diagram of Indoor Unit

HI-CHECKER V0.6.36     «				2021/08/17 19:31:05	En v l	Init Options – 🗆 🗙
. <b>⊪iData Collection</b> Data Recorder	Checker ID:0	System NO.:0 V	ODU IDU	W.M Address NC	).:16 ~	<b> </b> ← Back
Data List Data Graph	Available Settings		Curr	ent Settings		Remote forbidden
Change Obtaining Sys	Switch	0				
Operation control	Run Mode	Cool	Heat			
C File Loading	Func	Swim Pool	Domestic hot water	Floor heat 💮 Fan co	il	
CSV Conversion I≣Unit Information	TS					
슈 Firmware Update 凪 Load Memory Card 뗼 Code Information						
🖸 Grab Comm.						
	Operation	Change Setting				

Fig20 Operation control -Schematic Diagram of Water Module

#### 

• This operation control page will only be displayed when the water module is connected in the system , and the controlled items of different types of water modules are not completely the same.

#### **6** System Cycle Diagram Function

HI-CHECKER V0.6.36			2021/0	08/17 19:31:55 E	in 🔹 Unit Options — 🗆 🗙
« یابان Data Collection Data Recorder Data List	Checker ID: 0	System No.0 × AVWT_154TE	two-pipe v NoSwite	chBox × Cool ×	Sure Kerker Back
Data Graph Change Obtaining Sys Operation control Systemic Circulation C File Loading					Froperty     Value       DevID     ***       TI     ***       To     ***       IE     ***       FAN     ***       Ti     ***
<ul> <li>□ Load Memory Card</li> <li>□ Code Information</li> <li>□ Grab Comm.</li> </ul>				. *	Tr Tg

Fig21 Schematic Diagram of System Cycle Diagram Homepage

Under this function, the connection status of all air conditioners under a system and the changes of real-time parameters can be displayed in the form of pictures. This function requires the user to configure the parameters in advance, the steps are as follows:

- (1) Select the system number to be viewed.
- (2) Unified selection of outdoor unit models.
- (3) Current outdoor unit pipeline connection mode selection.
- (4) Selection of SW BOX accessories.
- (5) Indoor unit ability attribute selection.

(6) Click the "Sure" button, and the cycle diagram will be automatically generated according to the configuration.

(7) Click "Auto Update" and the parameters in the data table on the right will change dynamically according to the Hi-Checker device's report.

### 6 System Cycle Diagram Function



Fig22 Schematic diagram of the system cycle diagram display page

- shortcut
- (  ${\bf 1}$  ) Press and hold the middle mouse button to move the whole picture.
- (2) Click on the blank space of the cycle diagram and swipe up to enlarge the overall picture.
- (3) Click on the blank space of the cycle diagram and swipe down to reduce the overall picture.
- (4) Click on the picture of an outdoor or indoor unit, and its real-time parameter values will be displayed in the parameter table on the right.

#### 7 Change data system function

Under this function, user can switch the air conditioning system that is being collected according to the actual usage . After switching, the sub-functions under data collection are displayed according to the number of systems after switching.



Fig23 Change the Data System Diagram

HI-CHECKER V0.6.36					2021/08/17 19:36:09	En	<ul> <li>Unit Option</li> </ul>	ns – 🗆 🗙
<b>⊪h Data Collection</b> Data Recorder Data List	Checker I Connection	D:0 Status						← Exit
Data Graph	☑ 0	<b>—</b> 1	2	3	4	5	Ш. 6	7
Change Obtaining Sys	8		<b>☑</b> 10	□° 11,	12	13	□ 14	15
Operation control	16	17	18	19	20	21	22	23
CFile Loading	24	25	26	27	28	29	□ 30	<b>a</b> 1
CSV Conversion	32	33	34	35	36	37	38	39
i≡ Unit Information	40	41	42	43	44	45	46	47
⇔Firmware Update	48	49	50	51	<b>52</b>	53	54	55
Code Information Grab Comm	56	57	58	59	60	61	62	63

Fig24 Schematic diagram of the data collection homepage



- Click "Change Data Collection System" and a pop-up prompt will appear.
- After returning to the data collection homepage, you can re-select the collection system. After selection, click the secondary menu again to continue data monitoring.

## File Loading

#### 1 File loading preparation

Under this function, you can view and analyze in different ways by loading historical data. You need to prepare a previously collected data file package. By loading the file, you can view it in the form of data records, data lists, data charts, and system cycle diagrams. The display form of each sub-function is the same as that of data collection.

HI-CHECKER V0.6.36		2021/08/17 19:37:31	En	✓ Unit Options — □ ×
Mu Data Collection C File Loading I CSV Conversion I = Unit Information ↔ Firmware Update I Load Memory Card I Code Information Grab Comm.	1 	Select for the folder to store the reading file Select for the folder to store the reading file Clean/Exit Surc	Brower	2
		Fig25 Schematic diagram o	of file loadi	ng page

- 1: Enter the main function of file loading;
- 2: Select the saved historical file;

HI-CHECKER V0.6.36					2021/08/17 19:38:34	En	<ul> <li>Unit Option</li> </ul>	ons – 🗆 🗙
山口 Data Collection C File Loading Data Recorder	Checker I Connection	D:0						← Exit
Data List	<b>☑</b> 0	□ ↑	2	3	<b>a</b> 4	5	6	□ 7
Creating Report	· · ·	□ e	<b>☑</b> 10		12	• • 🔲 13	□ 14 ····	15
Systemic Circulation	16	17	18	19	20	21	22	23
■CSV Conversion	24	25	26	27	28	29	□ 30	31
I≡ Unit Information	32	33	34	35	36	37	38	39
	40	41	42	□ 43	44	45	46	47
Code Information	48	49	50	□ 51	52	53	54	55
Grab Comm.	56	57	58	59	60	61	62	63

Fig26 File loading home page diagram

## File Loading

#### 2 Create data report

This function is a report generated based on loading historical data. The user needs to fill in project information, unit information, project opinions, and check the parameters that user wants to print. The report will display all the checked parameters. After clicking the "Sure" button in the figure below, the report will be automatically stored in the work directory.

<ul> <li>HI-CHECKER V0.6.37</li> <li>«</li> </ul>						2021/08/19	9 08:49:25	En	~ I	Unit Option	s — 🗆	×
hi Data Collection C File Loading Data Recorder Data List	Checker ID:0	Syster 15 Su	m NO.: 0 Ire		1		K K	492/492	>	Ы	i ← Bac	k o
Data Graph Creating Report Systemic Circulation	Project Name Debugging Company Name	Debugging Phone	Debugger	Debugger Phone	Debugging Date	Debugging Time	Wrok Model	System name	InDoor capacity	OutDoor capacity	Capacity ratio	
⊒ Unit Information ຈ Firmware Update ฏ Load Memory Card	Supply ve	oltage	L1-N	L2-N	L3-N	L1-L2	L1-L3	L2-L3	18 N-E	16 Resistance ohm	112.5	Ł
⊇ Code Information ⊐Grab Comm.	Module model 0 Manufacturing number 0			Module model 1 Manufacturing number 1			Module model 2 Manufacturing number 2			Module model 3 Manufacturing number 3		
3	□Filter □Normal Run/Te	st Run	Report Date	•				Repor	t suggestion	1 *		

Fig27 Schematic diagram of creating data report page

- 1: Project information input area ;
- 2: Unit information input area;
- 3: Printing parameter selection area;
- 4: Inspection opinion filling area;

# CSV Conversion

This function can convert the data stored in the PC software into a common CSV format, allowing users to open the data file with software that supports this format.

HI-CHECKER V0.6.36	×		2021/	08/17 19:40:52 En	<ul> <li>Unit Options – </li> </ul>
Data Collection					2 → ⊘ Sure /← Ex
CSV Conversion					
Unit Information	Select the file to be conv	verted			
Firmware Update	C:\CHECKERTEST\pro	iject1∖			B
Load Memory Card					Farmena
Code Information					
Grab Comm.					

Fig28 Schematic diagram of CSV conversion function page

- 1:Select the file to be converted;
- 2: Start conversion after clicking "Sure";

HI-CHECKER V0.6.36		2021/08/17 19:41:28	En v Unit	Options – 🗆 🗙
میں httpata Collection File Loading CSV Conversion	Checker ID:0	Selected file's connecting device		]
I≡ Unit Information	Change Directory		Collected Sequence	Sys. No.
令Firmware Update	Catalogue setting of convert file(Default sa	me as source file)	1	0
Load Memory Card	3		2	10
回 Code Information	Convert			
⊡ Grab Comm.				
		*]≠+(		×**

Fig29 CSV conversion settings page

## CSV Conversion

- 1: Display the number of systems that need to be converted;
- 2: Select the storage directory of the converted file. If not, it will be stored in the working directory by default;
- 3: After the conversion button is clicked, the conversion work will start;

HI-CHECKER V0.6.36		2021/08/17 19:42:24	En	<ul> <li>Unit Options</li> </ul>	- 0 ×
.lluData Collection C File Loading I CSV Conversion I Unit Information		CSV Conversion		1	← Return
<ul> <li>↔ Firmware Update</li> <li>☆ Load Memory Card</li> <li>☆ Code Information</li> <li>☆ Grab Comm.</li> </ul>	2Converted 3Converted 4Converted 5Converted 6Converted 7Converted 8Converted 9Converted 10Converted 11Converted Converting finished. Writing finished, path:CACHECKERTEST\project1\	Main Menu	 	.**	

Fig30 Schematic diagram of CSV conversion completed page

## Model List

The purpose of this function is to view the list of models supported by the current Hi–Checker software. This function will be upgraded with Hi–Checker software to support more models.

HI-CHECKER V0.6.36		2021/08/17 19;	43:09 En v	Unit Options – 🗆 🗙
≪ ImiData Collection O File Loading ImiCSV Conversion Imimit Information O Firmware Update	Model text   service model HVR-140W RAS-140FSLNQG    AVW-48UESC HVR-160W RAS-160FSLNQG    AVW-54UESC		н н н	← Exit
辿 Load Memory Card ፼ Code Information ⊡ Grab Comm.	HVR-224W         AVW-76UESR           HVR-300W         AVW-96UESR           HVR-335W         AVW-96UESR           HVR-335W         AVW-96UESR           RAS-80FSNW1Q         AVW-96UESR           RAS-112FSNW1Q         AVWW-38U2SA           RAS-140FSNW1Q         AVWW-48U2SA           RAS-160FSNW1Q         AVWW-48U2SA           RAS-160FSNW1Q         AVWW-54U2SA/UCSA           HVR-112W         RAS-125FSLNQG           HVR-1140W         RAS-140FSLNQG           HVR-160W         RAS-160FSLNQG           HVR-160W         RAS-160FSLNQG			~
		Unit Information		

Fig31 Schematic diagram of model list page

## Firmware Upgrade

The purpose of this function is to upgrade the firmware version of the Hi-Checker device through the PC software. The prerequisite is that the PC software needs to establish normal communication with the Hi-Checker device. The specific operation steps are shown in the figure below.

HI-CHECKER V0.6.36		2	021/08/17 19:44:46	En v	Unit Option	ns – 🗆 X
I						<b>←</b> Back
O File Loading	Please open the correct upgrade file, otherwise it wi	Il cause unexpected error!				
CSV Conversion						
i≡ Unit Information						
⇔Firmware Update						
Load Memory Card						
Code Information						
⊡Grab Comm.						
		2	5			
			<u></u>			19
		K	V	V		
	Please choose firmware version:		Select	Upd	ate	

Fig32 Schematic diagram of firmware upgrade page

- 1: Please ensure reliable communication between the PC and Hi-Checker;
- 2:Select the target firmware to be upgraded;
- 3: Enter the new firmware version number;
- 4: Click Upgrade to start issuing the upgrade file;

HI-CHECKER V0.6.36		2021/08/17 19:48:00	En v	Unit Options	s — 🗆
Data Collection					← Back
File Loading	Now: 987frame/total : 1001frames				^
CSV Conversion	Now: 988frame/total : 1001frames				
= Unit Information	Now: 989frame/total : 1001frames				
= onit information	Now: 990frame/total : 1001frames				
PFirmware Update	Now: 991frame/total : 1001frames				
Load Memory Card	Now: 992frame/total : 1001frames				
Code Information	Now: 993frame/total : 1001frames				
Grab Comm.	Now: 994frame/total : 1001frames				
	Now: 995frame/total : 1001frames				
	Now: 996frame/total : 1001frames				
	Now: 997frame/total : 1001frames				
	Now: 998frame/total : 1001frames				
	Now: 999frame/total : 1001frames				
	Now: 1000frame/total : 1001frames				
	Now: 1001frame/total : 1001frames				
	Sending completed sent : 1001frame/total : 1001framesClear cache and exit				
	Transmission has completed, please wait for the end of LED marquee!!!				_
					>
	Please choose firmware version: 1993	Select	Upd	ate	

Fig33 Schematic diagram of firmware upgrade data transmission

# Firmware Upgrade

According to the prompts in the software, after the PC software has issued the upgrade package, the successful upgrade of the Hi-Checker device will be prompted in the form of a marquee. The duration is about 30s. In the end, it will automatically reset and execute the new program. If a software upgrade fails due to interference, the marquee will not appear. At this time, the operation steps are as follows:

- (1) Power on the Hi-Checker device again;
- (2) Press the reset button for more than 30s;

(3) Wait for about 2 minutes, until the four LEDs of USB, WLAN, TF card, and STATUS light up at the same time to indicate that the reset is complete. After about 4s, Hi-Checker resets automatically, and a new round of firmware upgrade can be performed through the PC software;

#### **1** Memory card data preparation

This function requires the files collected by the Hi-Checker device in the black box mode, please refer to the specific entry method of this mode <Hi-Checker User Guide>. The data of the memory card needs to be copied to the local computer and read by the PC software. After selecting the storage location of the parsed file and renaming it, click "OK" to enter the next page.

HI-CHECKER V0.6.36		2	2021/08/17 19:51:04	En v Unit	Options -	×
<ul> <li>≪</li> <li>Implate Collection</li> <li>File Loading</li> <li>Implate CSV Conversion</li> <li>Implate Undate</li> <li>Implate Load Memory Card</li> <li>Implate Code Information</li> <li>Grab Comm.</li> </ul>	Select File that need access C:\CHECKERTEST\CTRLDATA\J0180101.TXT Select the analytic file location C:\CHECKERTEST\ Obtain project name Project_TF_Card				Sure K Ex	tit

Fig34 File Loading Diagram

- 1: Load the memory card file to be parsed;
- 2: Select the location to save the parsed file;
- 3: Name the parsed project file;

HI-CHECKER V0.6.36			2021/08/17 19:53:5	58 En	v Unit	Options – 🗆 🗙
≪ Iu Data Collection O File Loading I CSV Conversion III Unit Information ⇔ Firmware Update III oad Memory Card	100% •The data conversion of SD card has	been completed, and the file is	s saved in:C:\CHECKERTEST\\Projec	ct_TF_Card.Please cli	2 ick the "Sure" butt	⊘ Sure
Code Information		<b></b>				
⊡ Grab Comm.	<u> </u>	1				

## Memory Card Reading

- 1: Display the storage location of the parsed file;
- 2: After "OK", enter the file loading function automatically, and use this function to view the data;

HI-CHECKER V0.6.36	1	202	1/08/17 19:54:31	En ×	Unit Options – 🗆 🗙
யி Data Collection O File Loading ப CSV Conversion		Browse For Folder	×		
E Unit Information		and the second sec			
편 Load Memory Card ፼ Code Information ⊡ Grab Comm.		<ul> <li>✓ 塩 系统 (C:)</li> <li>Boot</li> <li>✓ CHECKERTEST</li> <li>0720-4</li> <li>0723p2</li> <li>0980</li> <li>54124</li> <li>CTRLDATA</li> <li>Project_TF_Card</li> <li>project</li> <li>VRVR</li> <li>VRVR</li> <li>VRVTEST</li> <li>Intel</li> </ul>	iure	ver	
		Make New Folder OK Ca	ncel	-	

Fig36 Schematic diagram of the memory card data reading automatic jump page



Before using this function, Hi–Checker should connect with PC software and build communication first. Synchronize the local real–time time of Hi–Checker through the PC computer. Then adjust the Hi–Checker's DSW to enter the black box mode to collect data.

## Code Information

This function is to facilitate the user to view the detailed meaning of fault codes during the entire use of Hi-Checker. According to the function definition of the code, it is divided into four categories, and retrieval is performed on demand.

HI-CHECKER V0.6.36			202	1/08/17 19:55:14	En ×	Unit Options	- 🗆 ×
.∥uData Collection ்File Loading ஊCSV Conversion	«	1.Alarm.code			2 Protection	control	← Exit
I≡ Unit Information	-				Li lottetioni		
⇔Firmware Update	- • F	211-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			10		
Load Memory Card	-	3.Unit stop reason			4.Causes of frequency	converter stop	
☑ Code Information							
⊡ Grab Comm.							
			т. 			1990) 1990	

Fig37 Schematic diagram of code information page

Qingdao Hisense Hitachi Air-conditioning Systems Co.,Ltd.

The Company is committeed to continuous product improvement. We reserve the right, therefore, to alter the product information at any time and without prior announcement. T00389Q 09.2022 V01