User Manual

Ablerex PowerMaster Linux v1.0.1



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1.

Installation Instructions

The free software is available for all single-phase UPS models and downloadable from www.ablerex.eu/download

1.1

System requirements

Support OS:				
0.S	x86/x64	Version		
Ubuntu	x64	14.04.6/16.04/18.04/20.04/21.1		
Ubuntu	x86	16.04.6		
Debian	x64	9/10		
Debian	x86	9		
Mint	x64	20.3		
SUSE Linux Enterprise	x64	12/15		
Red Hat Enterprise	x64	8		
CentOS	x64	8		
Deepin	x64	23		
Peripherals: Com Port(RS-232) or USB				



Install Ablerex PowerMaster

Step 1. Input command: chmod +x powermaster.bin



Step 2. Input command: sudo ./powermaster.bin

```
chrono@ubuntu: ~/Desktop/powermaster_220216 Q = - 0 8
chrono@ubuntu: ~/Desktop/powermaster_220216$ chmod +x powermaster.bin
chrono@ubuntu: ~/Desktop/powermaster_220216$ sudo ./powermaster.bin
```

Step 3. Install Complete

F	chrono@ubuntu: ~/Desktop/powermaster_220216	Q			0	(8
	chrono@ubuntu: -/Desktop/powermaster_220216 ermaster/UPSdaemon/_codecs_cn.cpython-35m-x86_64-linux-gnu.se ermaster/UPSdaemon/libz.so.1 ermaster/UPSdaemon/libz.so.1 ermaster/UPSdaemon/backports/ ermaster/UPSdaemon/backports/ ermaster/UPSdaemon/_codecs_iso2022.cpython-35m-x86_64-linux-gnu.se ermaster/UPSdaemon/_bz2.cpython-35m-x86_64-linux-gnu.se ermaster/UPSdaemon/libz.so.1 ermaster/UPSdaemon/libz.so.1 ermaster/UPSdaemon/libz.so.1.0 ermaster/UPSdaemon/libzython3.5m.so.1.0 ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/libz.so.1.0 ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/libz.so.1.0 ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/libz.som.so.1.0 ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/libz.som.som.som.som.so.64-linux-gnu.some ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/libzer.some ermaster/UPSdaemon/libzer.some ermaster/UPSdaemon/libzer.some ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/certifi/ ermaster/UPSdaemon/libzer.some ermaster/libzer.some ermaster/UPSd	thor nux- so	≡ io - 35r	- 	<u>_</u> 64-	linu	зx
Remo Copy	ve and create /usr/local directory /file[ok]						
Add Inst chro	to systemd all complete. no@ubuntu:~/Desktop/powermaster_220216\$						
	Step 5. Click "Next" to next step						







Step 1. Input command: sudo sh /usr/local/powermaster/uninstall



Step 2. Uninstall Complete.







Press "Up" or "Down" key and then press "Enter"Key to into each function. The following chapters introduce each function.

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Monitoring UPS Information



The function will be divided into four blocks.

a. Shutdown Info

That will be shown the shutdown time of UPS or OS when UPS has events occurs (e.g., Power Failed).

b. Status Data

The real-time information for UPS e.g., Input Voltage, Output Voltage, Frequency...etc. c. UPS Status

The real-time status for UPS e.g., Power status, Battery Low...etc.

d. UPS Information

The rating and information for UPS e.g., Rating Voltage/Current, Manufacturer, UPS Model...etc.

a. Shutdown Info

Function	Function Describe	Remark
Next OS Shutdown	That will be shown the shutdown	
Next UPS Shutdown	time of UPS or OS when UPS has events occurs.	

b. Status Data

Function	Function Describe	Remark
Input Voltage	UPS Input Voltage	
Output Voltage	UPS Output Voltage	
Output Current	UPS Output Current	



Function	Function Describe	Remark	
Input Frequency UPS Input Frequency			
UPS Type	UPS Type (e.g. On-Line/Off-Line)		
Battery Capacity	Battery capacity of UPS		
Battery Life Battery Life of UPS		Battery Life Function need to Enable on configure menu.	
Autonomy time	Autonomy time of UPS	Autonomy time Function need to Enable on configure menu.	
Battery Voltage	Battery Voltage of UPS.	Additional Function need to Enable on configure menu.	
Load	Load percentage of UPS.		
Load(W)	Output Active power of UPS	Additional Function need to	
Load(VA)	Output Apparent Power of UPS	Enable on configure menu.	
Temperature °C	Temperature of UPS(Celsius)		
Temperature °F	Temperature of UPS(Fahrenheit)		

c. UPS Status

Function	Function Describe	Remark
Power Status	Input utility normal or not	
Battery Low	Battery Low normal or not	
Bypass	Bypass mode status	
AVR	UPS Boost/trim status	
Battery Status	Battery damage/ Disconnection or not	
UPS Type	UPS type (On-Line/Off-Line)	
Test in Progress	Under test in Progress or not	
Shutdown	UPS shutdown status	
Beeper	UPS beeper status	
Link Status	UPS communication status	

d. UPS Information

Function	Function Describe	Remark
Rating Voltage	UPS Rating Voltage	
Rating Current	UPS Rating Current	
Rating Battery Voltage	UPS Rating Battery Voltage	
Rating Frequency	UPS Rating Frequency	
Manufacturer	Manufacturer information	
UPS Model	UPS Model information	
Firmware Version	UPS Firmware information	



Control

	Instruction	
	Use arrow to select UPS, then select testing method. Press Q to leave.	
	UPS#1: None	
Biept.	Step 1: Select UPS	
Shrpp?	Step 2: Select Testing Process ilf Test ist to Battery Low incel Test 5 & 05 Shutdown Test ancel UPS & 05 Shutdown Test	

Command UPS directly for the following test.

- UPS Self-Test
- UPS Test to Battery Low
- Cancel UPS Self-Test
- UPS & OS Shutdown Test
- Cancel UPS & OS Shutdown Test

Please follow the below procedure to do. Step 1.Select which UPS to be tested Step 2. Select which command to be sent Step 3.Press "Confirm" to send command



Email Configuration

E-	Mail Configuration	-		
Us	ler Name:	XXX		
05	Ser Email Address:	xxx@xxxx.xxx.xxx		
10	ISSNOTOI	****		
57	TP Server:	*****		
20	UP Server Port:	20 UDF Admin		
PCC MIL	til To:	UPS AURILI		
E C	hierty	UDC Event		
TL	S ENCRYPTION:	ENABLED		
	and Fastation			
30	and Secting	had	ENABLED.	
	amunication Lost	med	ENABLED	
00	Shutdown Started		ENABLED	
00	war Failed		ENABLED	
1 22	w Battary		ENABLED	
Dr	wer Bestored		ENABLED	
LIF.	S Shutdown Started		ENABLED	
01	ver Load		ENABLED	
LIF	S Fail/Battery Disco	onect	ENABLED	
UF	25 Self Testing	rinnes s	ENABLED	
	a seen reacting		C. C	

Configure to send the event message (e.g., AC Power Fail) to specific one by email. The following section is for the detail configuration approach.

Function	Function Describe	
User Name	Sender	
User email Address	select a sender email	
Password	Password of your email server	
SMTP Server	SMTP server or IP address	
SMTP Server Port	SMTP Server port	
Receiver Name	name of receiver	
Mail To	Mail address of receiver If you want to send an email to more than 1 email address, you must use "," to separate email addresses.	
Subject	Subject of email	
TLS ENCRYPTION	Enable TLS encryption or not	
When it is Enable, it can be sent by E-mail if detects an abnormality event in the UPS		



Function	Function Describe
Communication Established	UPS Communication Established
Communication Lost	UPS Communication disconnection
OS Shutdown Started	Operating OS will start shutdown
Power Failed	Input utility abnormal
Low Battery	UPS Battery Low
Power Restored	Input utility normal
UPS Shutdown Started	UPS will start shutdown
Over Load	UPS over loading
UPS Fail/Battery Disconnect	Battery damage or Disconnection
UPS Self Testing	UPS test in Progress

After setting, you can press "Email Test" to confirm that have received test mail or not. If received, press "OK" to save





	Use arrow to se one. Press Q to	lect scheduled quit.	Instruction jobs, and press enter to edit. (Press I to insert a	new
	Next Test Time: Next Shutdown T Next Restart Ti	2022-02-14 16: ime: None me: None	50:00		
*	Date Time 02-14 16:50	UPS Name UPS#1	Control UPS Self-Test 10 Second	Frequency Co Once	nnent
_					

PowerMaster supports the scheduling self test, turn-off function for UPS. The following section is for the detail configuration approach.

Add Schedules:

Press" I" key to add new schedule.

Add Schedule UPS Name: Control: Frequency: Date Time: Comment:	UPS Self-Test 10 Second 2022/02/15 11:20		
C	ancel	Save	

Function	Function Describe
UPS Name	Select which UPS to be tested
Control	Select which command of schedule UPS Self-Test 10 Second Self Test (1-99)Minutes(The test time can be define by the user) UPS Self-Test Until Battery Capacity UPS Self Test Until Low Battery Condition Shutdown Operating System and UPS, then Turn on UPS
Frequency	Set execute cycle of the schedule
Date Time	Date and time for schedule setting



Edit Schedules:

Use "UP" and Down" key to select the schedule you want to modify and press "Enter" key to modify task.

Use arrow to se one. Press Q to	lect scheduled quit.	jobs, and press enter to edit. S	Press I to insert a new
Next Test Time: Next Shutdown T Next Restart Ti	2022-02-15 11: 'ine: None me: None	30:00	
Date Time 02-15 11:30	UPS Name UPS#1	Control UPS Self-Test 10 Second	Frequency Connent Once
02-15 11:30	UPS#1	UPS Self-Test 16 Second	Once



8 Event Log

Use arrow	to select between	buttons. Press Q to quit.	on		
UPS Name	Date TU	e Event			_
UPS#1	2022-02-17 14	17:39 Communication Establi	shed		
005#3	2022-02-17 14	40138 Communication Lost	a band		
00581	2022-02-17 14	40145 Commonication Establi	sned		
UP5#1	2822-82-17 14	41:23 Power Restored			
UPS#1	2022-02-17 14	41131 Low Battery			
UPS#1	2022-02-17 14	41:42 UPS Fail/Battery Disc	onnect		
UPS#1	2022-02-17 14	41153 UPS Self Testing			
UP5#1	2022-02-17 14	42:08 Self Test Complete			
UP5#1	2022-02-17 14	42:23 Over Load			
UPS#1	2022-02-17 14	43:12 Communication Lost			
UP5#1	2022-02-17 14	43:37 Communication Establi	shed		
-					
1					
44		1 /	1	>	

The event log can be read directly via PowerMaster or export to an file with txt format for application. The following chapter is for the detail operation.

Function	Function Describe
Date	Select which date to be view
UPS Name	Select which UPS to be view
Filter	Select which Event to be view
Update	For data refreshing
Export	Export data save to below folder: /usr/local/powermaster/UPS/
< , >	Select Previous/Next page
<< , >>	Select First/Last page



Data Log

Use arrow	to select be	tween butto	ns. Press Q 1	a quit.	uis -		
UPS Name	Time	Input Voltage	Output Voltage	Load	Input Frequency	Battery Capacity	Temperatu
UPS#1	14:17:40	220.1 V	230.1 V	100 %	00.0 Hz	100 %	30.1 °C
UPS#1	14:17:50	220.1 V	230.1 V	100 %	00.0 Hz	100 %	38.1 °C
UPS#1	14:18:00	228.1 V	238-1 V	100 %	60.0 Hz	100 %	38.1 °C
UPS#1	14:19:10	220.1 V	230.1 V	100 %	00.0 Hz	100 %	30_1 °C
UP5#1	14:18:20	220.1 V	230.1 V	100 %	60.0 Hz	100 N	30.1 °C
UPS#1	14:10:38	228.1 V	238.1 V	100 %	00.0 Hz	100 %	38.1 °C
UPS#I	14:18:48	220.1 V	230.1 V	108 %	60.0 Hz	100 N	30.1 °C
UP5#1	14138:58	220.1 V	230.1 V	100 %	60.0 Hz	100 %	30.1 °C
UPS#1	14:19:08	228.1 V	238.1 V	100 %	60.8 Hz	100 %	30.1 °C
UP5#1	14:19:10	220.1 V	230.1 V	100 %	00.0 Hz	100 %	30.1 °C
UPS#1	14:19:20	220.1 V	230.1 V	100 %	00.0 Hz	100 %	30.1 °C
1095#1	14:19:30	228.1 V	258.1 V	100 %	00.0 Hz	100 %	30.1 °C
UPS#1	14:19:39	220.1 V	230.1 V	100 %	00.0 Hz	100 %	30.1 °C
UPS#1	14:19:50	220.1 V	230.1 V	100 %	60.0 Hz	100 N	30.1 °C
UPS#1	14:20:00	220.1 V	238.1 V	100 %	60.0 Hz	100 N	30.1 °C
UPS#1	14:20:10	228.1 V	238.1 V	100 %	50.0 Hz	100 %	36.1 °C

Set the file to be executed before the system shutdown. The selectable time is from 0 min. to 20 min.

Function	Function Describe
Date	Select which date to be view
UPS Name	Select which UPS to be view
Additional Data	Press" Additional Data" to see additional data of UPS. Additional Function need to Enable on configure menu.
Update	For data refreshing
Export	Export data save to below folder /usr/local/powermaster/UPS/
< , >	Select Previous/Next page
<< , >>	Select First/Last page



10 General Settings

Shutdown Settings OS Shutdown When Power Fallure: OS Shutdown When Battery Low: OS Shutdown When Battery Low than Cap:	EMARLED DISABLED DISABLED
OS Shutdown Type: When Power Fallure, OS Shutdown Buffer Time: When Battery Low, OS Shutdown Buffer Time: When Battery Capacity Us less or equal: - OS Shutdown Buffer Time:	NonShutdown 1 (1-2880 min) 1 (8-680 min) 20 (0-106 %) 1 (1-600 min)
When Utility Recovered, When Utility Recovered, UPS Output Shutdown Delay After the Buffer Ti	05 Cancels Shutdown UPS Turnoff ne: 02 (nin)
Data Record Settings Record Interval (Per Secs): 10 Day of data retention(days):1	(8: Never Delete)
Additional Settings Additional Function: enable Battery Life Function: enable Autonomy Time Function: enable	
Export Teport	Save Cancel

Allows user to select and set to Data Log function and set to turn of UPS or OS condition etc.

Shutdown Setting Block					
Function	Function Describe				
OS Shutdown When Power Failure	Set the O.S shutdown operation after Power Failure				
OS Shutdown When Battery Low	Set the O.S shutdown operation after Battery Low				
OS Shutdown When Battery Low than Cap.	Set the O.S shutdown operation after Battery Low than Cap.				
OS Shutdown Type	O.S shutdown options 1. Shutdown 2. NonShutdown 3. Hibernate				
When Power Failure, OS Shutdown Buffer Time	Set the Buffer Time for O.S shutdown operation after Power Failure				
When Battery Low, OS Shutdown Buffer Time	Set the Buffer Time for O.S shutdown operation after Battery Low				
When Battery Capacity is less or equal	Set the Buffer Time for O.S shutdown operation after Battery Capacity is less or equal				

(15)



-OS Shutdown Buffer Time				
When Utility Recovered	When utility Recovered O.S system can be set to: OS Continues Shutdown OS Cancels Shutdown UPS can be set to: Turn off UPS None			
UPS Output Shutdown Delay After the Buffer Time	Set time interval from Windows shut- down to UPS turn-off			
Data Record Settir	ngs Block			
Function	Function Describe			
Record Interval (Per Secs)	Set Record timer interval			
Day of data retention(days)	Set data storage retention(days) of the record list. The data base will be not deleted if set to 0			
Additional Settings Block				
Function	Function Describe			
Additional Function	PowerMaster will collect additional data(e.g., Output Current, Battery Volta- geetc.) from UPS ,if Enable Additional function Please check with your distributor to see if UPS has support			
Autonomy Time Function	PowerMaster will collect Autonomy Time information, if Enable Autonomy Time function Please check with your distributor to see if UPS has support			
Battery Life Function	PowerMaster will collect Battery Life in- formation, if Enable Battery Life function Please check with your distributor to see if UPS has support			
Export Setting	Export Setting save to below folder /usr/ local/powermaster/UPS/			
Import Setting	Select the Setting file which you want and			



11	Communication Settings

Reminder	
Communication interface a	ind com port settings work only if Protocol i
standaro	
UPS Communication Setting	IS
Protocol:	Standard
Com Port:	/dev/ttyuSB8
communication interface;	K5232
Total Unit of UPS:	1
Baud Rate:	2460
1105 #1+	10541

Allows user to select and set the connecting RS-232/USB or Remote etc.

Function	Function Describe
Protocol	Standard: Communicate with UPS via Com Port/USB Remote: The "Remote " is for connecting the PowerMaster, which installed on another computer, and the IP address should be the master PC, which connected UPS.
Connect IP	Please refer to above describe
Com Port	Setting Serial port path (e.g.: /dev/ttyXRUSB0)
Communication Interface	Select which Interface of UPS to be communicated
Total unit of UPS	Setting amount of unit
Baud Rate	Setting Baud Rate of UPS
UPS #1	Setting UPS name



About



It displays copyright and version information of PowerMaster.





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