



MEGATEC

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# UPSilon 2000

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**Uninterruptible Power Supply Software**

**User's Manual**

*For*

*Windows XP, Windows 2000*

*Windows Vista, Windows Server 2003*

*Windows 7, Windows Server 2008*

*Windows 8, Windows Server 2012*

*Windows 10*

*Small Business Server 2003,*

*Novell NetWare, Linux, FreeBSD, Mac*

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## **SIMPLE INSTALLATION**

### ***Windows 2000, XP, Vista, 7, 8, 10***

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- ◆ Hardware Installation (see page 9)
  1. Connect RS232 cable to UPS communication port.
  2. Connect female connector of RS-232 cable to the PC.
  3. USB solution is optional offer. Whenever use USB interface, only MegaTec specific USB cable is applicable, or the UPS must embedded with our USB IC. Contact our service center for details , or your UPS manufacturer.
- ◆ Software Installation(see page 14)
  1. Insert UPSilon 2000 CD to the CD-ROM, UPSilon 2000 will display the installation menu, or your can select 'run' from windows start menu and execute 'setup.exe'. UPSilon 2000 files will be copied into the directory you appointed. When UPSilon is launched, the operating system will select the local language in UPSilon for displaying. If there is no preferred language in UPSilon, it will use English interface instead.
  2. Once installation is completed, check if Rupsmon is activated in the taskbar. And check Rupsmon service is enabled under Service of Control Panel ◦ ( see page 6)
  3. Click on Start, select UPSilon 2000 under All Programs and 'click on'UPSilon 2000 for Windows' to login to the main menu for further parameter setting (see page 6)
  4. Click on SETTINGS from the main menu to select the correct communication type and Comm Port (if applicable) and return to main menu . If the status shows communicating with PC, it means installation is successful. (see page 20)

***---For More Parameters, Please Reference Other Topics---***

## **SIMPLE INSTALLATION**

### ***Novell NetWare v3.1x,v4.x,v5.x***

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#### ◆ Hardware Installation (see page 9)

- 1.Connect male connector of UPSilon 2000 cable to UPS communication port .
- 2.Connect female connector of UPSilon 2000 cable to RS-232 communication port of system. If there is only a 25 pin RS-232 connector, you can use the 9 pin to 25-pin adapter to convert it

#### ◆ Software Installation (see page 34)

- 1.Login the file server as a SUPER-USER or a user with access rights in sub-directory SYS: SYSTEM.

F:\>LOGIN SUPER-USER

- 2.Put the UPSilon CD in CD ROM.

- 3.Execute INSTALL.EXE in CD ROM.

A:\>INSTALL

- 4.After installation, please shutdown NetWare operating system and restart again. The system will load the UPSilon.NLM and execute it.

- 5.When UPSilon for NetWare has been loaded, server screen shows the successful loading message. You could switch to the UPSilon with key ALT+ESC.

- 6.After installation, if “Connect” is showed at “Comm. Status”, it means you have connection with UPS.

- 7.If you have more than one com port on your File Server, please insert two or more “LOAD AIOCOMX” command in the system AUTOEXEC.NCF file after UPSilon 2000 installation.

***---For More Parameters, Please Reference Other Topic-***

## SIMPLE INSTALLATION

### *Linux, FreeBSD*

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◆ Hardware Installation (see page 9)

1. Connect the DB-9 male connector of the cable to the UPS interface. (A DB-9 female connector of RS232 protocol type.).
2. Connect the female connector of DB-9 cable to the dedicated RS232 serial port (If there is only a DB-25 connector on your computer, uses a DB-9 to DB-25 converter).

◆ Software Installation (see page 85)

1. Login as Super-User ◦
2. Insert UPSilon CD in CD-ROM Driver.

(1) Mount the UPSilon CD into Unix file directory '/cdrom'. For Centos instance, in Linux, type:

```
# mount -t iso9660 /dev/cdrom /mnt
```

(Please use device name of your system. Reference Appendix B for more information.)

(2) Unzip the file to be install into/tmp

```
#tar -C /tmp -zxvf /mnt/Linux/centos-upsilon.tar.gz
```

3. Execute Installation Program

```
# cd /tmp/upsilon
```

```
#!/install.linux
```

(If not possible to load the file to UNIX system, please use FTP or tar format disk for installation. See page 56)

4. Select the item that to be installed in the system from the menu and enter appropriate setting. (Ensure no other process conflicts with the same serial port). Installation program will set UPSilon for Unix as automatic daemon

Note: If the UPSilon has been installed in the FreeBSD v4.x by the 'UPSilon bsd-3.Z,' please install the "unix/patch/FreeBSD\_4.x/compat3.x/install.sh" of the setup CD. For even higher version, please update the system with 'compat3.x' from the WEB site).

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# 1. Introduction

UPSilon 2000 is a smart UPS monitoring and controlling software. UPSilon displays the status of UPS (e.g. input & output voltage, line frequency, load, temperature and battery capacity) in digital and graphic, which can help the users monitor the quality of power supply. Simultaneously, the users can remotely monitor UPS via network and manage the power more effectively. On AC failure or UPS battery low, UPSilon 2000 will perform its monitoring function without people around. UPSilon 2000 offers to send the warning messages by email, or SMS as event notification. In addition, UPSilon 2000 has a new Windows NT service function, which allows the monitoring program to be executed automatically before log in. UPSilon is available in many languages , you can select the one that is most familiar for you to carry out the software configuration and operation. Today the Internet is widely used, not only for PC but also for Server, coming into the times of receiving and sending information 24 hours a day. The power management without people has been a necessary function of UPS. UPSilon 2000, with full functions will be the best partner of your smart UPS.



## 1.1 Packing including

- ◆ One UPSilon 2000 software CD
- ◆ One UPSilon 2000 cable,
- ◆ UPSilon 2000 user's manual (For standard version)

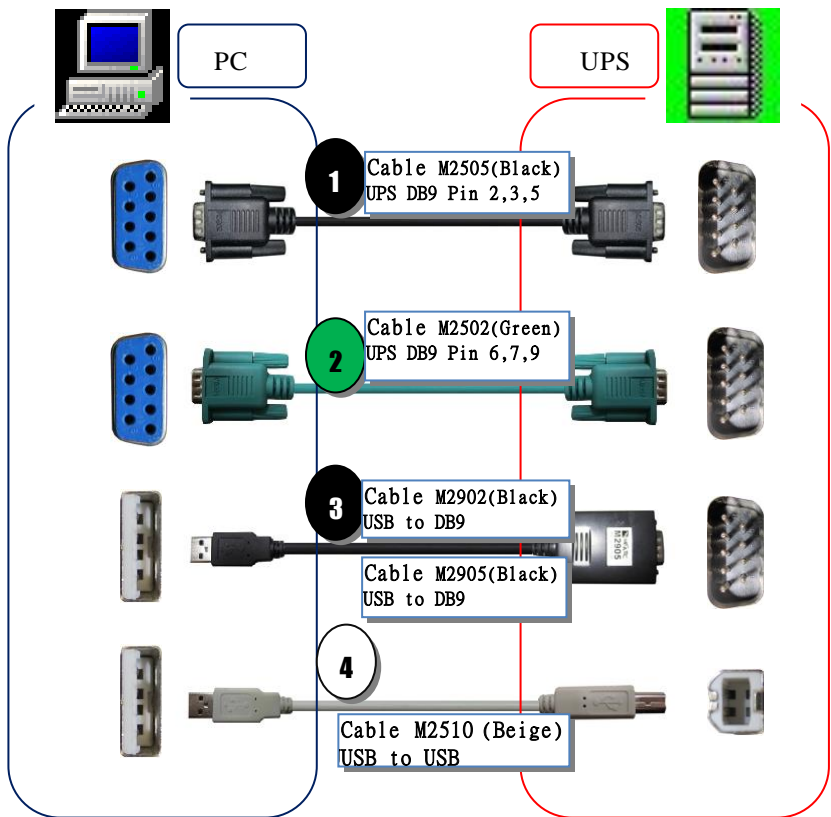
## 1.2 System Requirements

UPSilon 2000 hardware and software requirements as follows:

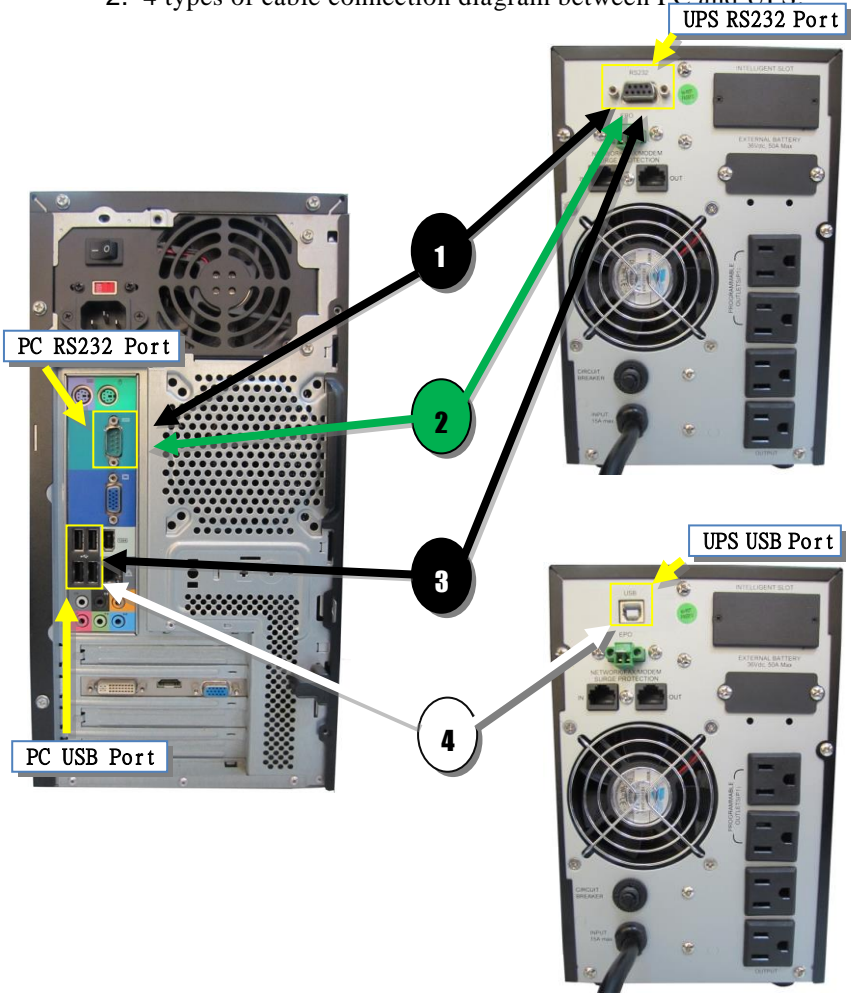
- ◆ Computer system RS232 communication port: COM1 ~ COM4 or USB port.
- ◆ Match True RS-232 communication UPS.
- ◆ Microsoft Windows 98
- ◆ Microsoft Windows NT v4.0
- ◆ Microsoft Windows 2000
- ◆ Microsoft Windows Me
- ◆ Microsoft Windows XP
- ◆ Microsoft Windows Vista
- ◆ Microsoft Windows 7,8,10
- ◆ Microsoft Windows Server 2003,2008,2012
- ◆ Novell NetWare v3.1x,v4.x,v5.x,v6.x
- ◆ Linux
- ◆ FreeBSD

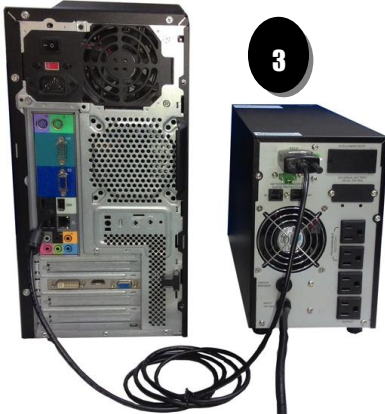
## 2. Hardware Installation

1. Please make sure to connect the correct communication cable between UPS and the PC. UPSilon could be connects with 4 different types of cable as below to adopt for different type of UPS usage.



2. 4 types of cable connection diagram between PC and UPS:





**3. WARNING :****COM Port Definition in NetWare :**

	<b>I/O Address</b>	<b>IRQ</b>
COM1	3FX	4
COM2	2FX	3
COM3	3E8	4
COM4	2E8	3

- **In Novell NetWare printer setting (PSERVER.NLM), do not select the RS-232 port for UPS communication.**
- **Cables for UPSilon 2000 are specially designed. Do not use any other RS-232 cable to connect with the UPS**

## 3. UPSilon 2000 for Windows

### 3.1 Features

- ◆ Support multiple shut down.
- ◆ Support multiple languages.
- ◆ Sending notification by e-mail or SMS.
- ◆ Remote monitoring UPS via TCP/IP or Internet.
- ◆ Detect AC fail and UPS battery low automatically.
- ◆ Scheduling turn on/off timing.
- ◆ Displaying the UPS status at graphic, such as the temperature, voltage, load, line frequency etc.
- ◆ Broadcasting warning message.
- ◆ Setting the countdown timing and the interval of each warning.
- ◆ Setting UPS diagnostic and self- test time.
- ◆ Before removing the system, automatically close and store the applicable programs.
- ◆ Recording and analyzing the UPS status.

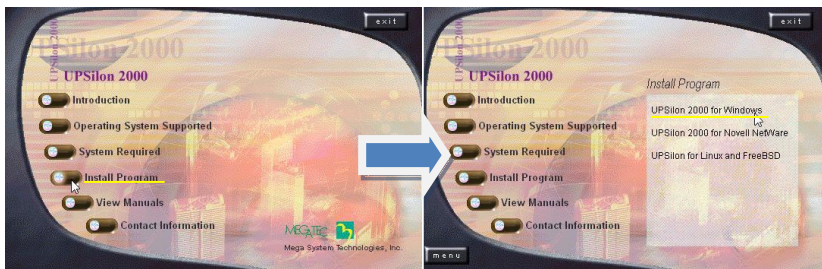
## 3.2 Software installation and Remove

### 3.2.1 Install UPSilon

UPSilon will auto detect local language of your system during installation. If language is not supported, it will install and display in English interface.

Installation Procedure :

1. Power Up PC ◦
2. Insert UPSilon CD into CD-ROM and it will show options as below. Click on **【 Install Program 】** → **【 UPSilon 2000 for Windows 】** to execute installation.

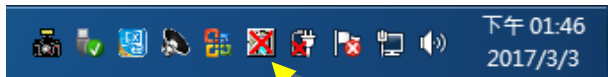


Or, enter CD-ROM's drive with `:\windows\setup.exe` to execute installation of R command under Windows Start

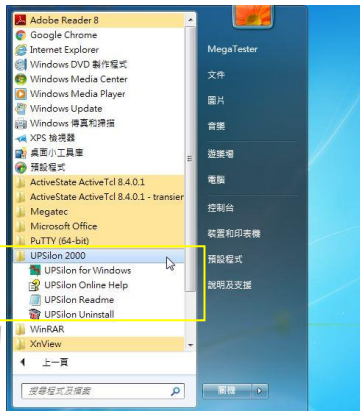


All UPSilon Files will be copy to the default directory C:\Program Files\Megatec\UPSilon 2000 or C:\Program Files (x86)\Megatec\UPSilon 2000

3. Once installation completed, task bar will show Rupsmon icon or the UPSilon menu should be available under All Programs of Windows Start menu.



**Rupsmon**



**UPSilon 2000 Menu**



### ■ 3.2.2 Remove UPSilon

After installation , 4 options are available under UPSilon 200 menu, to uninstall UPSilon, please select and click on UPSilon Uninstall.



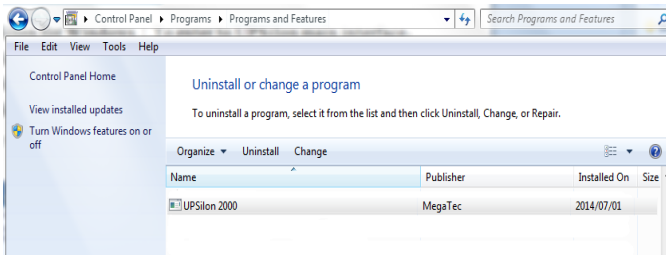
UPSilon for Windows : To enter to UPSilon main interface

UPSilon Online Help : UPSilon Help Guide

UPSilon Readme : Brief description of UPSilon

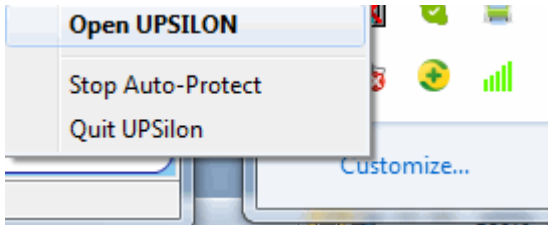
UPSilon Uninstall : To remove UPSilon from Windows

Or, enter to Program of Control Panel to Uninstall UPSilon

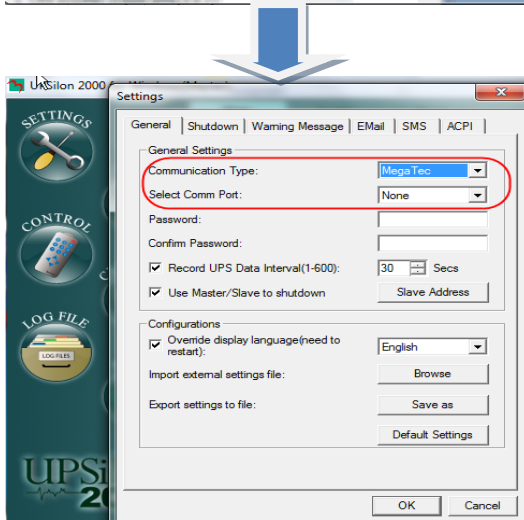
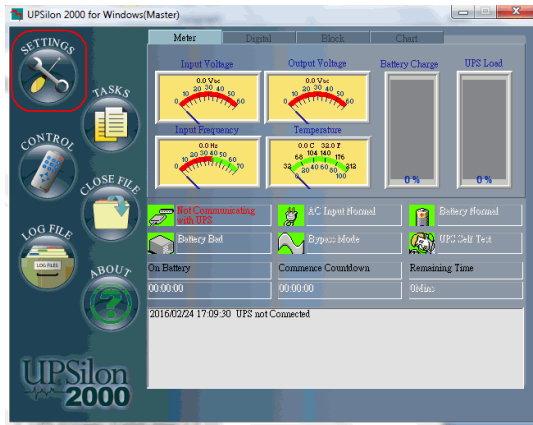


### 3.3 Software Start Up

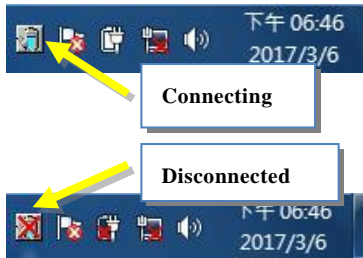
1. Ensure the correct cable is connected between UPS and the PC. Also, UPS is operation normally.
2. Right click on Rupsmon icon from task bar and select Open UPSilon.



- Click on **【 SETTINGS 】** to enter configuraton. Under General tab, select communication type and Comm Port, then click on OK to return to the main menu.



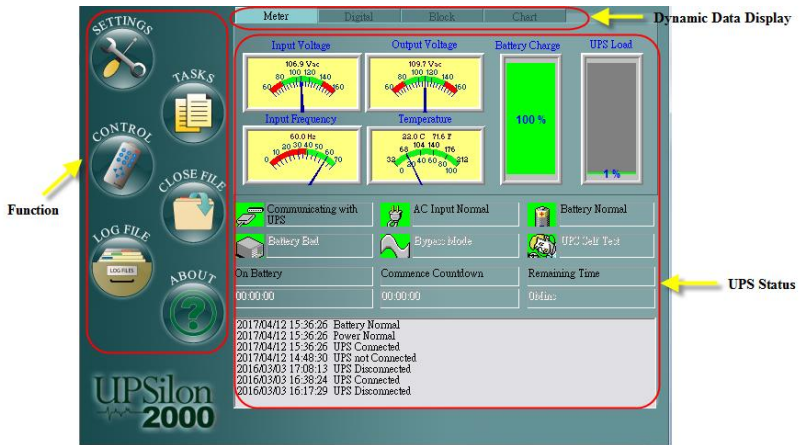
4. OnceConnection status can be check from the task bar.  
Status shows as below



### 3.4 Operation Description

There are 3 sections on the main menu of UPSilon 2000 :

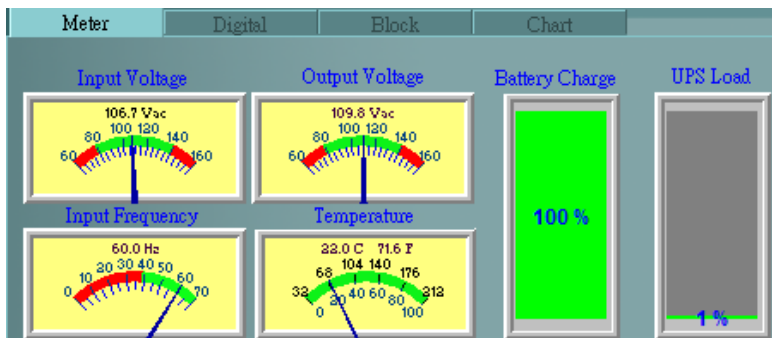
1. UPS Dynamic Data Display ( refer to 3.4.1 )
2. UPS Status ( refer to 3.4.2 )
3. Function ( refer to 3.4.3 )



### ■3.4.1 UPS Dynamic Data Display Section

When UPSilon receives all the data from the UPS, it will present the data in varies format such as Meter, Digital, Block and Chart. The Contents includes Input Voltage, Output Voltage, Battery Capacity, UPS Load...etc

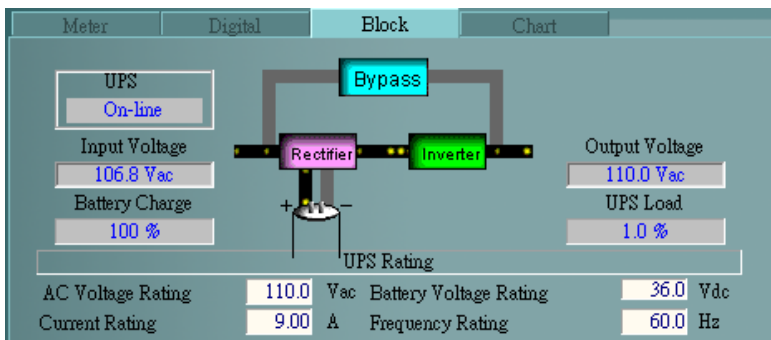
#### 1. Meter



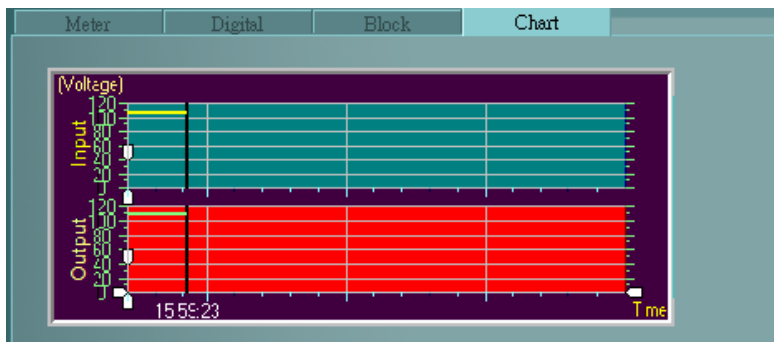
#### 2. Digital

	Meter	Digital	Block	Chart
		Input Voltage	Output Voltage	Input Frequency
Now:		106.6 V	109.7 V	60.0 Hz
Min:		106.6 V	109.7 V	60.0 Hz
Max:		106.7 V	109.8 V	60.1 Hz
		Battery Charge	UPS Load	Temperature
Now:		100 %	1.0 %	22.0 C 71.6 F
Min:		100 %	1.0 %	22.0 C 71.6 F
Max:		100 %	1.0 %	22.0 C 71.6 F

### 3. Block









### 4. Chart



### ▪ 3.4.2 UPS Status Section

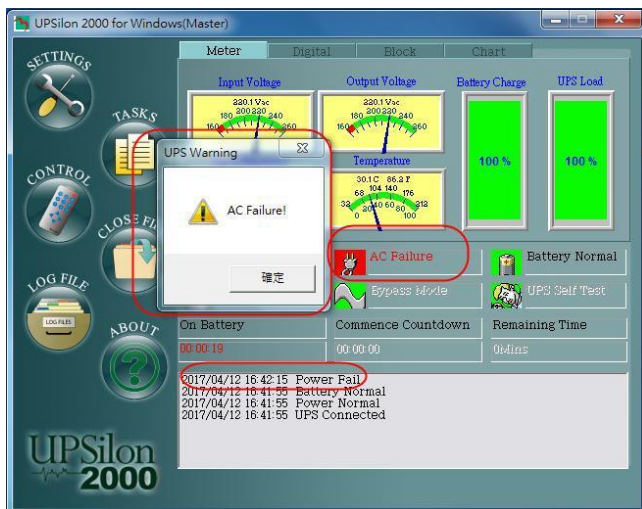
This section is to check and monitor if UPS is connected, AC Normal/Abnormal; Battery Normal/Abnormal; Bypass Mode, UPS Self-Test, Battery Remaining Time..etc as below

 Communicating with UPS	 AC Input Normal	 Battery Normal
 Battery Bad	 Bypass Mode	 UPS Self Test
On Battery	Commence Countdown	Remaining Time
00:00:00	00:00:00	0:Min:
<pre> 2017/04/12 15:36:26 Battery Normal 2017/04/12 15:36:26 Power Normal 2017/04/12 15:36:26 UPS Connected 2017/04/12 14:48:30 UPS not Connected 2016/03/03 17:08:13 UPS Disconnected 2016/03/03 16:38:24 UPS Connected 2016/03/03 16:17:29 UPS Disconnected </pre>		

When UPSilon detects event occurs, pop up message will appears as well as the icon will flashes as warning. Event with date/time will be show in the column too



Example below when AC failed



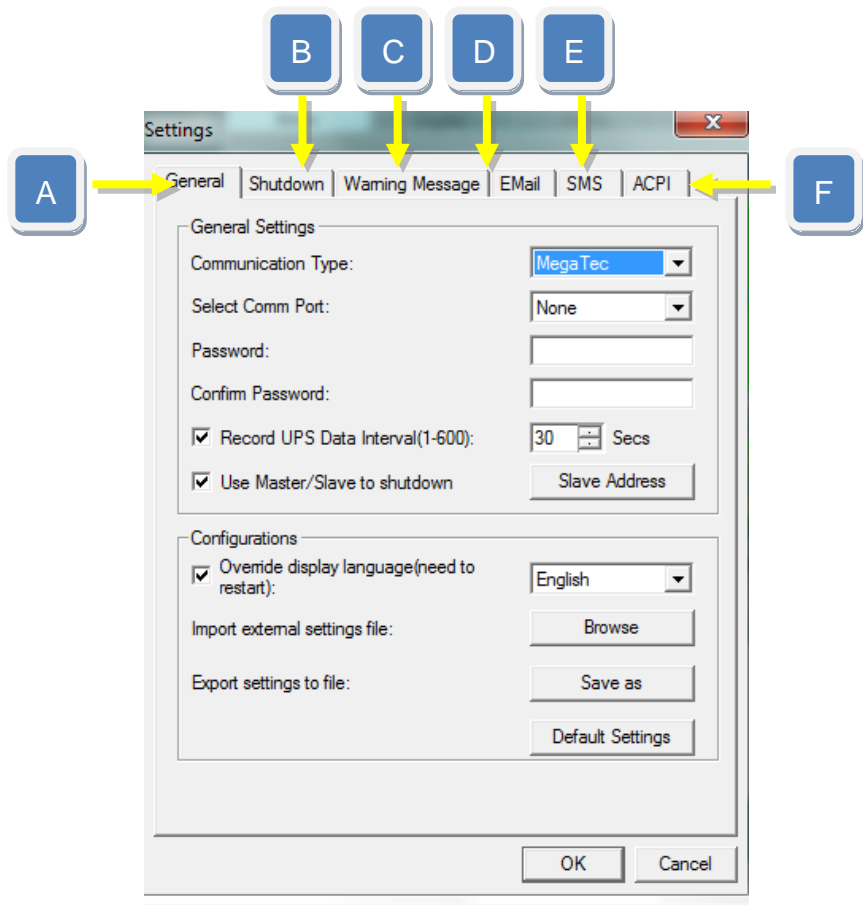
### ▪ 3.4.3 Function Section

After installation, parameter can be configure under SETTINGS.And UPSilon will be perform according to its setting.

1. SETTINGS (refer to 3.4.3.1)
2. TASK (refer to 3.4.3.2)
3. CONTROL (refer to 3.4.3.4)
4. CLOSE (refer to 3.4.3.5)
5. LOG FILE (refer to 3.4.3.3)
6. ABOUT (refer to 3.4.3.6)



### ▪ 3.4.3.1 SETTINGS



## **A. General**

### ◆ **Communication Type :**

Communication Type : MegaTec/Demo/Mega(USB) /SEC(2400bps) /SEC(9600bps)/Slave are available under drop down list, select the appropriate one for communication

### ◆ **Comm Port :**

Configure communication port to connect with the UPSilon 2000 cable. (COM1-COM4).

### ◆ **Password :**

Set the password of the remote connection of the UPSilon 2000. The connection would be successful only if the right password is provided. The password prevents the remote unconfirmed computer from connection.

### ◆ **Confirm Password :**

Re-type the password for confirmation

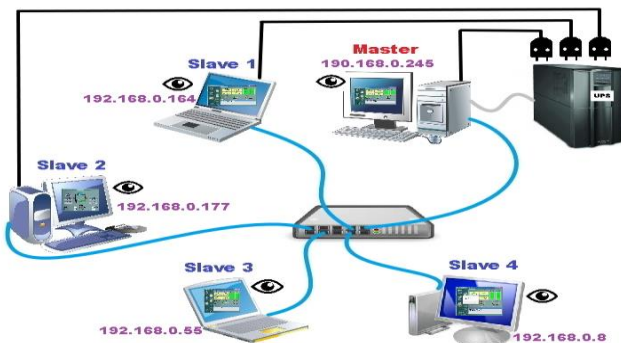
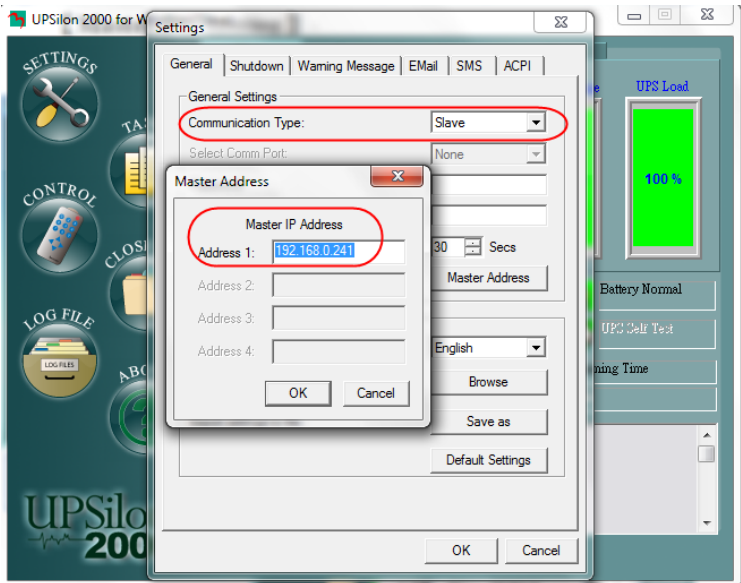
### ◆ **Record UPS Data Interval:**

Set the record time interval about input & output voltage, line frequency, load, battery capacity and temperature for Data log.

### ◆ **Use Master/Slave to shutdown:**

When the PC (Slave) is not physically connects with the UPS but also need to monitor the UPS status as well as to shutdown PC when AC failed/Battery low, this is where to enter the IP address of the Master PC which has UPS connected. Maximum 4 Slave PCs can be entered and connected to one Master PC.

When Slave PC connects to Master, ensure to select “Slave” under communication type and then enter the IP address of the Master PC. See below



◆ **Override display language (need to restart) :**

Select the language for the interface display. Once selected, PC is required to be restarted.

◆ **Import external setting file :**

Click on browse to import the saved setting file.

◆ **Export setting to file :**

Click on Save as to save the current setting as a file

◆ **Default Settings**

Click to reset to default

## **B.Shutdown**

This section is to configure if the server to be shutdown or in hibernation mode when AC failed or Battery low or battery capacity reaches to X percentage.

◆ **Use ACPI to shutdown**

When select to shutdown by ACPI, it will be shutdown by battery percentage under power option /management of the PC.

◆ **Use UPSilon to shutdown**

UPSilon will shutdown according to the configured condition below

1. **After AC Failure, Commence Computer Shutdown Sequence in (0-2880 minutes):** Set the continuous time for system operation after AC power fails. When reaches to the configured minute, UPSilon will commence to shutdown. Please refer to the UPS hardware manual or consult to the UPS

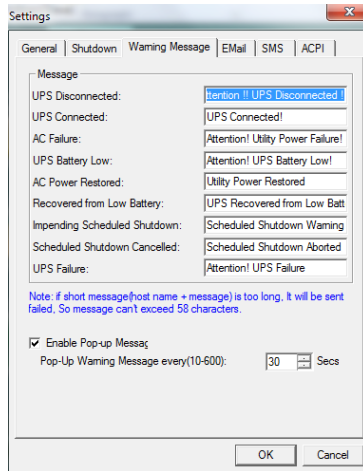
supplier before your configuration to ensure UPS battery has enough time and battery capacity to last for operation.

*(0-2880 minutes, default is 10 minutes)*

2. **If Low Battery Occurs, Commence Shutdown Sequence in (0-600 minutes):** Set minute for system operation when battery low before shutdown. *(0-600 minutes, default is 0 minute)*
3. **After AC Failure, Commence computer shutdown sequences lower than battery capacity (1-100%):** This is to set to commence shutdown only when battery capacity reaches to configured % after AC failed. *(1-100%, default is 20% )*
4. **Shutdown operating system:** To shutdown system or Hibernation
5. **Auto Save Application File:** Before shutdown, it auto saves all the operating program and file. If the file is un-named, UPSilon saves as TEMP file. (e.g. ~Wnnnn.TMP). The file that saved and closed can be check from CLOSE FILE in the function section of UPSilon.
6. **Optional Command File to Execute:** Set the file to be executed before the system shutdown. Ensure to enter the full directory and file name. *Attention:If the program which you execute can not quit automatically, you would not be able to shutdown Windows and turn off UPS.*
7. **Display Closed Files record on UPSilon Restarts:** If enabled, then UPSilon would show the saved file when restart.
8. **Turn Off UPS:** Set the minute to turn off the UPS after shutdown.

*Attention: After shutting down system and turning off UPS, please do not cut the power supply. Otherwise, UPS and computer would fail to start automatically when AC power restores.*

## C. Warning Message





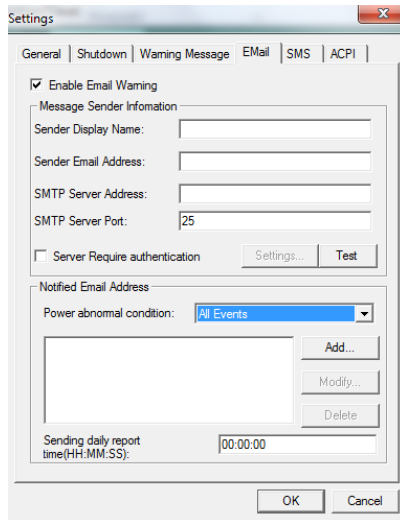
### ◆ Enable Pop-Up Warnings:

This is to set time interval to appear the pop-up warning on the screen when UPSilon 2000 detects the happening of the event or when countdown begins for scheduling. The detail description is editable. Attention: The maximum total length is 70 bytes which including device name. (*10~600 seconds, default is 30 seconds*)

## D. Email

### ◆ Enable Email Warnings

When enabled, UPSilon will send email notification to the configured receipt with all events or selected one.



- **Sender Display Name:** Name of the message for "Sender"
- **Sender Email Address :** Email address for sending message.
- **SMTP Server Address :** Set-up SMTP mail server address by IP or server-name.(e.g. 210.71.130.1 or megatec.com.tw)
- **SMTP Server Port:** Enter the SMTP port number of the server
- **Server Require Authentication :** Some Email Server required authentication by password, user can set the password here. Once done, click on Test to send test mail to verify all settings are correct
- **Add:** Enter the recipient's email address who to receive event notification by email. To add more than one email address, use “, “ between each email address. Select the specific event or all event to be notify when occurs. There is no limitation on the number of mail recipients. E
- **Modify:** To modify email address that added
- **Delete:** To delete email address that added
- **Send daily report:** To configure the specific time to send daily report

## D.SMS

### ◆ Enable SMS Notification:

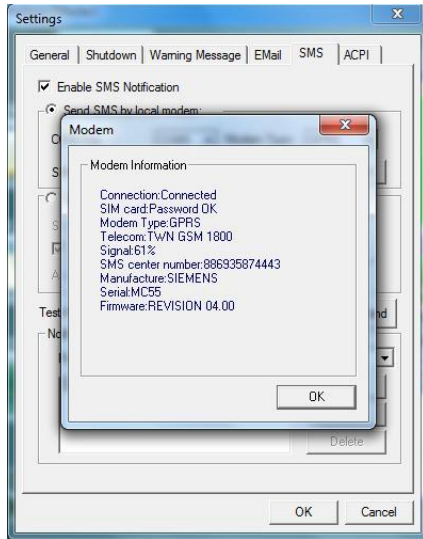
This is to send event by SMS notification. Can be send through our GPRS /CDMA modem, or our SMS Server Software



## ✧ Send SMS by local modem:

- COM Port: Select the correct COM port when modem is connected
- Modem Type: Select GPRS or CDMA (CDMA is normally use in Korea and China)
- SIM PIN: Enter the password of the SIM card

Click on Modem Information to view the current connected modem status

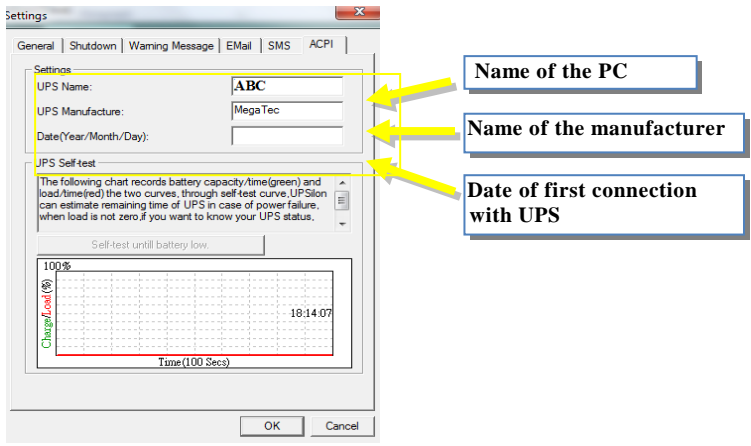


❖ By SMS Server:

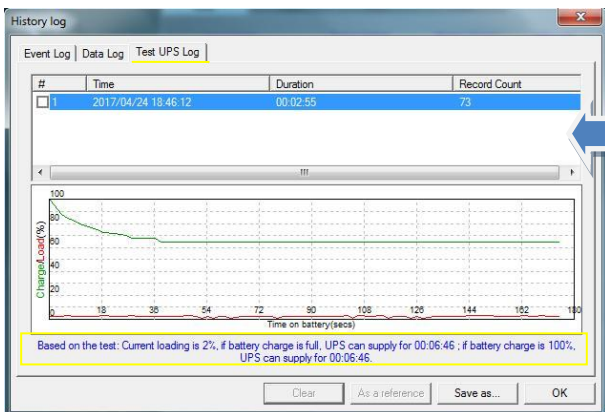
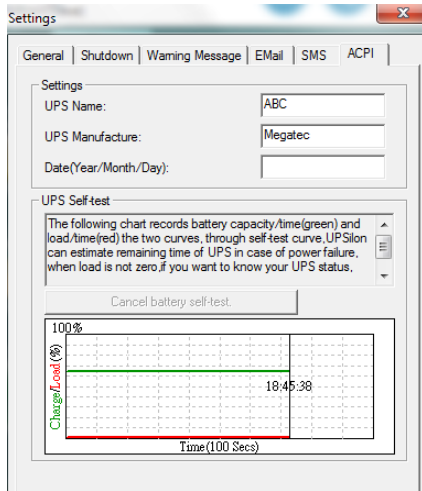
- Sever Address: If the modem is connected on other PC , please enter the IP address of it
- Port: Enter the Port number
- Account/Password, if the server requires account and password to login, please enter
- Test Message Receiving Number: Enter the mobile number that to receive test SMS notification
- Add/Modify/Delete" button to add, edit , delete mobile number to receive the SMS

## E. ACPI

- ◆ Use ACPI to shutdown: When select to shutdown by ACPI under setting, it will be shutdown by battery percentage under power option /management of the PC

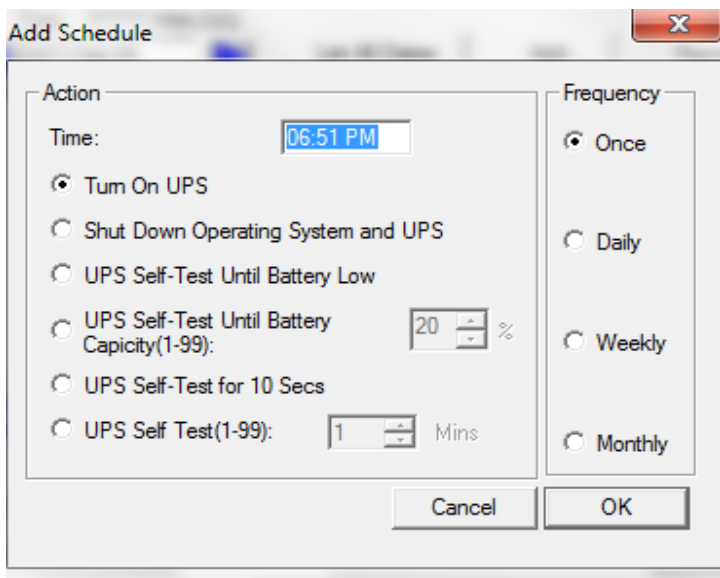


- ❖ Self- test until battery low: Click when load is more than zero to begin UPS self test. Graph below records battery/time and load/time. This is a reference of estimated battery remaining time when AC failure under such loading

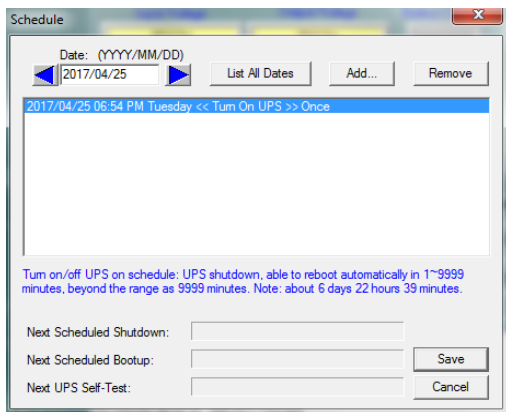


### ▪3.4.3.1 TASKS

- ✧ UPSilon can set the scheduled time for UPS turn on /off and self-test. Therefore, the system could be operated without the management from system supervisor. You can set what and how often the schedule execution is. The setting category and operating frequency are as below.



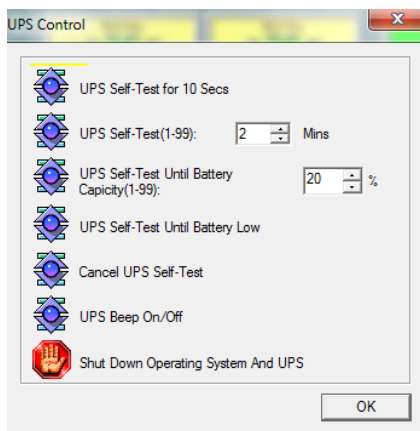
Click on Add to add new actions and configure time and frequency of the task. Then click on OK to view the list of schedule. All correct, then click on Save





### 3.4.3.2 CONTROL

- ✧ This is to perform specific test to the UPS directly



### 3.4.3.3 CLOSE FILE

- ✧ In this section, this is to check the closed applications and saved files before shutdown.

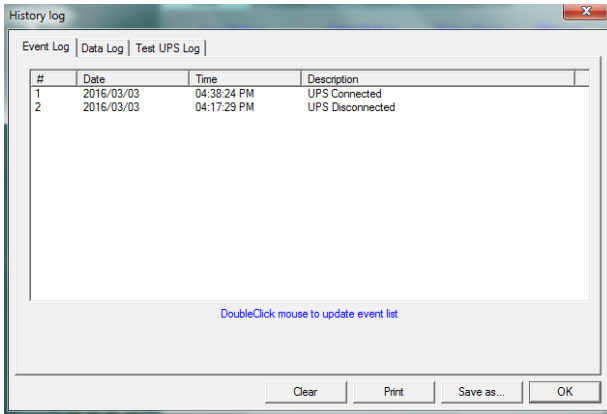


### 3.4.3.4 LOG FILE

- ✧ This is to record the event, data and UPS Test Log. The record interval is configurable under General Tab of Setting section.

#### -Event Log

To check and view the date, time and description of the event happened. List can be saved or print out. Click on OK to return to the main menu of UPSilon.



#### -Data Log

It records UPS Input Voltage, Output Voltage, Frequency, UPS Load, Battery Capacity..etc. The record interval configurable under General Tab of Setting section. Double click on the list would refresh data. Or right click to have option to refresh, or view last page and Next page. List can be saved or print out. Click on OK to return to the main menu of UPSilon.

- ✧

History log

Event Log | Data Log | Test UPS Log

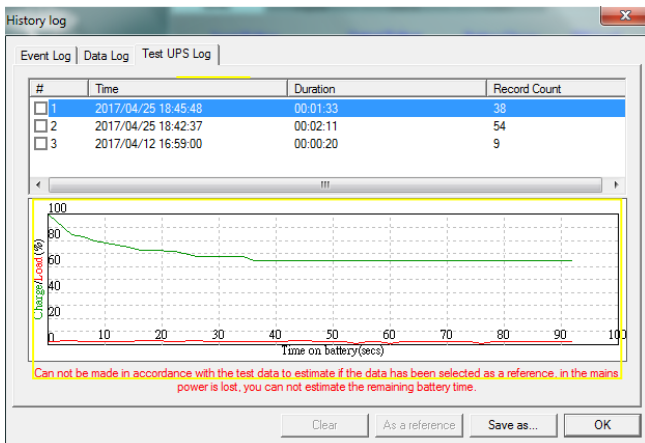
#	Time	Input Vol...	Output V...	Input Fre...	UPS Load	Battery Capa...	Temper...
1	2017/04/26 11:34:33	112.0 v	112.0 v	60.0 Hz	0.0 %	100 %	56.0 C
2	2017/04/26 11:34:03	112.0 v	112.0 v	60.0 Hz	0.0 %	100 %	56.0 C
3	2017/04/26 11:33:33	112.0 v	112.0 v	60.0 Hz	0.0 %	100 %	56.0 C
4	2017/04/26 11:33:03	112.0 v	112.0 v	60.0 Hz	0.0 %	100 %	56.0 C
5	2017/04/26 11:32:33	113.0 v	113.0 v	60.0 Hz	0.0 %	100 %	56.0 C
6	2017/04/26 11:32:03	112.0 v	112.0 v	60.0 Hz	0.0 %	100 %	56.0 C
7	2017/04/26 11:31:33	112.0 v	112.0 v	60.0 Hz	0.0 %	100 %	56.0 C
8	2017/04/26 11:31:03	113.0 v	113.0 v	60.0 Hz	0.0 %	100 %	56.0 C
9	2017/04/26 11:30:33	113.0 v	113.0 v	60.0 Hz	0.0 %	100 %	56.0 C
10	2017/04/26 11:30:03	112.0 v	112.0 v	60.0 Hz	0.0 %	100 %	56.0 C
11	2017/04/26 11:29:33	113.0 v	113.0 v	60.0 Hz	0.0 %	100 %	56.0 C
12	2017/04/26 11:29:03	113.0 v	113.0 v	60.0 Hz	0.0 %	100 %	56.0 C
13	2017/04/26 11:28:33	112.0 v	112.0 v	60.0 Hz	0.0 %	100 %	56.0 C
14	2017/04/26 11:28:03	113.0 v	113.0 v	60.0 Hz	0.0 %	100 %	56.0 C
15	2017/04/26 11:27:33	113.0 v	113.0 v	60.0 Hz	0.0 %	100 %	56.0 C

Page 1, totally 15 pages, maximum 500 items at one page, right click mouse for popup menu.

Clear Print Save as... OK

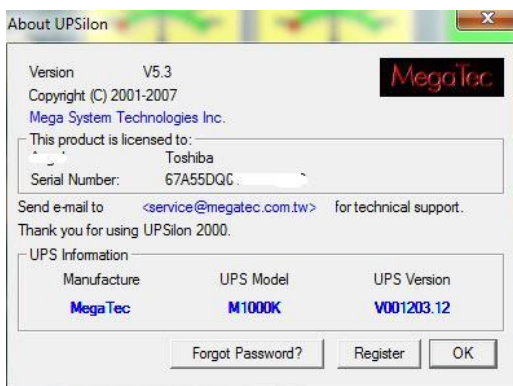
## -Test Log

To view all the UPS Self Test Data record. Select the test performed from the list and the graph below would show the result. It also provides estimated battery remaining time when AC fail under such current load. Data can be saved.



### ▪ 3.4.3.5 ABOUT

- ◇ It shows UPSilon 2000 version number copyright and serial number information. Click on Register to fill-in all the detail required for registration.



## 4 UPSilon 2000 for NetWare

### 4.1 Features

- ◆ Auto sending warning messages by e-mail.
- ◆ Auto sending warning messages by pager.
- ◆ Auto detecting AC power failure and UPS battery low.
- ◆ Providing the UPS expected time setting of power supply.
- ◆ History data recording.
- ◆ Auto shutting down the system and turning off the UPS when AC power failed.
- ◆ Broadcasting the warning messages to all the workstations.
- ◆ Display the system shutdown countdown.
- ◆ Able to operate on server and workstation.
- ◆ Schedule on/off in a week
- ◆ Programmable UPS auto-testing period.
- ◆ UPS status reporting on server screen, including the input/output voltage, load, line frequency, temperature and so on.
- ◆ Local Network UPS monitoring through an Net Agent or SNMP Agent.

## 4.2 Software Installation

UPSilon for NetWare is a NetWare Loadable Module (NLM). The installation will copy files into: SYS: SYSTEM and modify the file AUTOEXEC.NCF. All these software installation procedures require the user is able to read and write files in sub-directory SYS: SYSTEM.

### 4.2.1 Software Installation Procedure

1. Login the file server as a SUPERVISOR or a user with access rights in sub-directory SYS: SYSTEM.

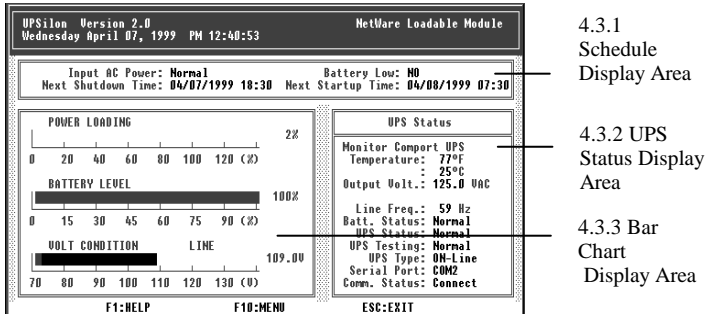
**F:\>LOGIN SUPERVISOR**

2. Put the UPSilon CD in CD ROM.
3. Execute INSTALL.EXE in CD ROM.

**A:\>INSTALL**

4. After installation, please shutdown NetWare operating system and restart again. The system will load the UPSilon.NLM and execute it.
5. When UPSilon for NetWare has been loaded, server screen shows the successful loading message. You could switch to the UPSilon with key ALT+ESC.
6. If you have more than one com port on your File Server, please insert two or more "LOAD AIOCOMX" command in the system AUTOEXEC.NCF file after UPSilon 2000 installation

After installation, the main screen of UPSilon for NetWare is as below.



## 4.2.2 File Descriptions

### File Descriptions of UPSilon for NetWare

UPSilon.NLM	UPSilon for NetWare execution program
UPSilon.LOG	UPS status history file
UPSilon.SCH	Schedule ON/OFF time configuration file
UPSilon.PRN	UPS data analysis file, this file could be operated with LOTUS or EXCEL for UPS status analysis.
UPSilon.CFG	UPSilon for NetWare configuration file

Installation program will copy these files into the sub-directory of SYS: SYSTEM.

## 4.3 Main Screen Description

### 4.3.1 Schedule Display Area

Input AC Power: <b>Normal</b>	Battery Low: <b>NO</b>
Next Shutdown Time: <b>04/07/1999 18:30</b>	Next Startup Time: <b>04/08/1999 07:30</b>

#### ◆ Input AC Power

Status of AC power: when AC power failed, UPS will start to supply the power to system. UPSilon will broadcast the warning message of AC power failure to all the workstations. This will also show the system shutdown countdown. UPSilon will make all the workstations off-line if AC power has not restored in the setting time. After operating system has been shut down, the UPSilon will turn-off UPS and the system will be restarted when AC power restored.

#### ◆ The meanings of input AC Power are :

**.Normal : AC Power Normal**

**.Failed : AC Power Failed**

#### ◆ Battery Low

This shows whether the UPS battery is getting exhausted. When UPS battery power low, the UPS could supply system with power. The UPSilon will broadcast the battery low situation to all the workstations, and the system would be shut down in a minute.

#### ◆ The meanings of Battery Low are:

**.NO: UPS Battery Normal**

**.YES: UPS Battery Low**



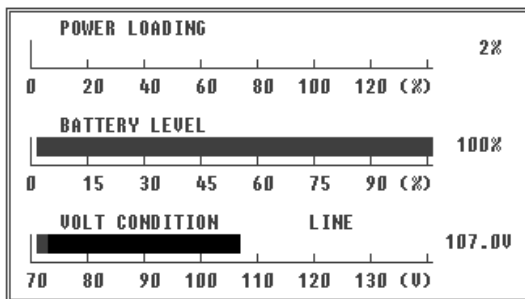
◆ Next Shutdown Time

Next system shutdown time in the schedule setting.

◆ Next Startup Time

Next start time of system in the schedule setting.

### 4.3.2 Bar chart display area



◆ POWER LOADING

Percentage of power loading. When loading is more than 90 percent, the bar will turn red to show the warning signal.

◆ BATTERY LEVEL

Percentage of UPS Battery power. When the battery power level drops below 20 percent. The bar will turn red to show the warning.

◆ VOLT CONDITION

Input voltage of AC Power

### 4.3.3 UPS Status Display Area

UPS Status	
Monitor Comport UPS	
Temperature:	80°F
	: 27°C
Output Volt.:	125.0 VAC
Line Freq.:	60 Hz
Batt. Status:	Normal
UPS Status:	Normal
UPS Testing:	Normal
UPS Type:	ON-Line
Serial Port:	COM2
Comm. Status:	Connect

- ◆ Temperature    the interior temperature of UPS
- ◆ Output Volt.    The output voltage of UPS
- ◆ Line Freq.      The line frequency of input voltage
- ◆ Batt. Status    UPS battery status

**.Normal : UPS Battery Normal**

**.Failed : The UPS Battery Failed, Please Examine and Repair.**

- ◆ UPS Status

**.Normal: Online UPS In a Normal Condition**

**.Batt. Mode: UPS supply the system with power.**

**.Bypass: AC power bypasses the system power directly.**

**.Boost: system power voltage is too low, UPS boosts the system power.**

◆ UPS Testing

This shows whether the UPS is doing the self-testing

**.Normal: UPS had done or did not do self-testing**

**.Testing: UPS self-testing**

◆ UPS Type

**.On-line: On-line Type UPS**

**.Off-line: Off-line Type UPS**

◆ Serial Port

Shows which communication port is used for UPS communication.

◆ Comm. Status

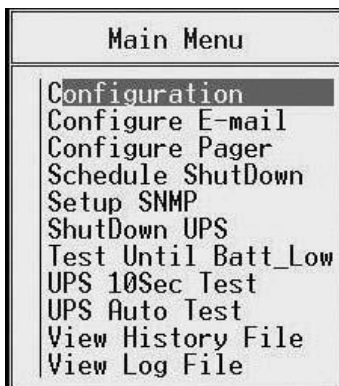
Show the status of UPS communication

**.Connect: System connects to UPS**

**.Disconnect: System did not connect to UPS**

## 4.4 Main Menu Functions

Press F10 in the main menu of UPSilon for NetWare and this will be shown on the screen as follows.



### 4.4.1 Configuration

Configuration		
Time Between AC Power Fail and initial warning message	: 5	Sec
Delay of Shutdown Server when AC Power Failed	: 2	Min
Delay Between Warning Message	: 10	Sec
Delay of Shutdown Server when Battery Low	: 1	Min
Duration of UPS Auto Testing	: 10	Min
Communication Serial Port	: 0	
Time of History Recording	: 1	Min
Period of UPS Auto Testing	: 2	Week
Battery Voltage Rating	: 24	Volt
Enable Pager(y/n)	: n	
Enable E-mail(y/n)	: n	

◆ Time Between AC Power Fail and initial warning message

This option sets the delay time between AC power failure and initial warning message to all the workstations.

Sometimes, the AC line power has a surge or temporary unstable voltage input, and this setting will prevent this situation. Therefore, we set this delay time to make sure there is actually an AC power fail happened before we send out the warning message.

.settings range:5~32

.default value:10 seconds

◆ Delay of Shutdown Server when AC Power Failed

This option sets the delay time between AC power fail and server shutdown. When line power failed, the UPS will supply the system with power. The setting value should be smaller than the length of the time, which the UPS supply.

.setting range:2~999 minutes

.default value:10 minutes

**Attention: Please refer to the UPS power capacity in UPS user's manual for proper delay time setting for your system.**

◆ Delay Between Warning Message

When AC power failed, the file server will send warning messages to all the workstations. This option sets the duration between every warning message.

.setting range:5~30 seconds

.default value:20 seconds

◆ Delay of Shutdown Server when Battery Low

This option sets the delay time between UPS battery low and file server shutdown.

When AC power failed, the UPS will supply the power to your system from the UPS battery. But, if the UPS battery is in low capacity, discard what is the setting delay time between AC fail and file server shutdown, the system will shut down the file server in the delay time of this option. This will protect the file server from instant turn-off due to insufficient battery power.

.setting range:0~2 minutes

.default value:1 minute

◆ Duration of UPS Auto Testing

This option is for setting both functions below:

- 1.The battery discharge time of the UPS when doing the self-testing.
- 2.This is to set a period of time for executing “RUPSDOWN.NCF” before system shutdown. (See section P40/4.6 for details of these settings.)

.setting range:1~99 minutes

.default value:10 minutes

◆ Communication Serial Port

This option sets the communication port between UPS and file server (RS232 port).

This RS232 port could only be used by UPS, do not shared with other equipment.

.setting range:COM1~COM4

.default value:COM1

◆ Time of History Recording

This option sets the delay time between every system status record in the history file.

.setting range:0~120 minutes

.default value:1 minute

**Attention: System status recording will be turn-off when this option set as 0.**

◆ Period of UPS Auto Testing

The battery of UPS would not be last long if it is always in the ample state. Therefore, you should make the UPS testing itself and using the power of battery once in a while. That is exactly what the function of UPS auto testing is doing. This option sets the period of UPS auto testing.

.setting range:1~4 weeks

.default value:1 week

◆ Battery Voltage Rating

This option sets the reference voltage of the UPS battery. The UPSilon could calculate the battery capacity only if the accurate input of the battery voltage. This voltage setting is also the reference for showing UPS capacity. Most of the on-line UPS could provide this information for UPSilon and the users do not have to give the battery voltage setting here. If the status of battery capacity shows incorrect value or you are using off-line UPS, you have to give the voltage rating of

the UPS battery. Please refer to the manual of UPS for battery voltage rating.

◆ Enable Pager(y/n)

This option sets whether to send the warning messages to inform the administrator by pager.

◆ Enable E-mail(y/n)

This option sets whether to e-mail the warning messages to inform the administrator.

#### 4.4.2 Configure E-mail

You can configure to send the messages (i.e. AC power fail, UPS battery low or system shutdown signal) detected by UPSilon to inform the system administrator by e-mail. The setting mode and figure is as below.

- 1.Postoffice (server IP address): input the server IP address in digital (e.g. 210.71.130.1) and press <Enter> to save.
- 2.E-MAIL ADDRESS: input the e-mail address for receiving the event messages and you can send the messages to different stuff respectively. You should compart the addresses with comma and press <Enter> to save.

Email Configuration	
Postoffice (xxx.xxx.xxx.xxx): 127.0.0.1	
POWER EVENT	E-MAIL ADDRESS
AC FAIL	maintenance@negatec.com.tw
Battery Low	maintenance@negatec.com.tw
AC Power Recovered	maintenance@negatec.com.tw
Battery Low Recovered	maintenance@negatec.com.tw
Schedule Down	maintenance@negatec.com.tw
Schedule Down Cancelled	maintenance@negatec.com.tw



### 4.4.3 Configure Pager

You can configure to send the messages (i.e. AC power fail, UPS battery low or system shutdown signal) detected by UPSilon to the system administrator by pager. The setting mode and figure is as below.

1. Modem Connects to Communication Serial Port: configure which communication port connects to Modem. The setting value: 1 ~ 4
2. PAGER NUMBER: input the calling pager number. If necessary, please input the code for outside line first, then add “,” for 0.5 second delay time, the full pager numbers at last.
3. Code to send: you can input the sending code that stands for some event.

**For instance:** Set the Modem to connect to COM1 and dial “0” to access an outside line, and the pager number is “0,,0947123456” and “#1234#” means AC power failed.

Pager Configuration		
Communication Serial Port (0..4) : 1		
POWER EVENT	PAGER NUMBER	MESSAGE
AC FAIL	0,,0947123456	#1234#
Battery Low	0,,0947234567	#112233#
AC Power Recovered	0,,0943456789	#33221#
Battery Low Recovered	0,,0943987654	#99595#
Schedule Down	0,,0959654321	#19959#
Schedule Down Cancelled	0,,0959223344	#43213#

### 4.4.4 Schedule Shutdown

In this function, you can set the ON/OFF time of the file server every week. Before the scheduled shutdown, system will send out the warning messages to inform users on the network and it would permit users to finish the process on the network. This

warning message starts 5 minutes before scheduled shutdown and will be sent out every 1 minute.

The system will shut down file server and UPS at the scheduled shutdown time. The UPS will be in sleeping state and wake up according to the next scheduled turn-on time. The setting figure is as below.

Schedule ShutDown							
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
S		09:00	08:30	09:00	07:30	08:00	08:30
D		18:00	17:30	18:30	17:30	17:00	12:30
S: Start-Up Time				Format: HH:MM			
D: Shut-Down Time				24-hour clock			

- ◆ S: Start-Up Time : system start-up time
- ◆ D: Shut-Down Time : system shut-down time
- ◆ Format : these inputs are in 24 hours format with HH: MM, **be ignored with a blank input.**

**For instance:** in the scheduled shutdown table shown in the above, the system will be turn-on 9:00 next Monday morning and be turn-off 6:00 at night. The system will be turn-on 8:30 Tuesday morning and be turn-off 5:30 in the afternoon (the rest may be deduced by analogy). The system will not be turn-on or turn-off on Sunday.

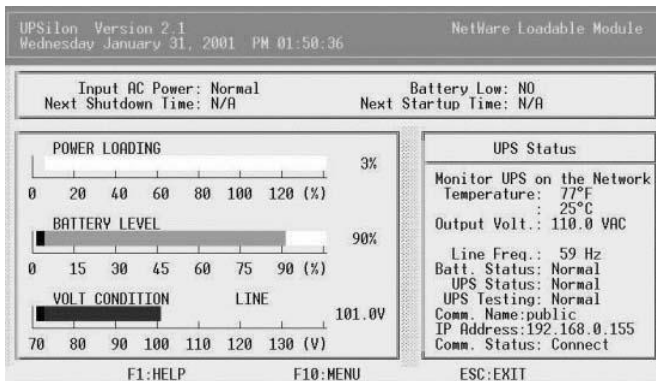
**Attention: Do not turn off the UPS power switch. That will make the UPS unable to wake up.**

#### 4.4.5 Setup SNMP

Choose this function to monitor UPS via Net Agent or SNMP Agent in Lan. The meaning of each field is as detailed below:

SNMP Configuration
Use SNMP to Monitor the UPS?(y/n): <input checked="" type="checkbox"/>
IP Address : 192.168.0.1
Community Name : public
Allow UPS Shutdown?(y/n): y

- ◆ Use SNMP to Monitor the UPS : Set this value to Monitor UPS via Net Agent or SNMP Agent.
- ◆ IP Address : Set Net Agent or SNMP Agent's IP
- ◆ Community Name : Set “public” or “private”
- ◆ Allow UPS Shutdown : Shutdown UPS when power event occurs.



#### 4.4.6 Shutdown UPS

Shut down the file server and turn off UPS immediately.

If there is any users on the network with opening files, the system will show a warning message and ask for confirmation to shut down file server. If manager select “YES”, the system will enforce the user to disconnect from network, then shut down file server and UPS. The UPS will be in sleeping state and wake up according to the system configuration.

**Attention: Do not use the DOMN command in the “:” prompt. In that case, UPS will not be able to enter sleeping state and wake up automatically.**

#### 4.4.7 Test Until Batt\_Low

This function makes the UPS to do a self-testing of all functions. The testing will last until UPS battery exhausted.

Execution mode: press<Enter> in Main Menu for selecting “Test until Batt\_Low” and press “Esc” back to the main screen. This “Testing” will be shown in bar of “UPS Status”. In order to stop the test, please go back to “Main Menu” and select “Test until Batt\_Low” once again.

#### 4.4.8 UPS 10Sec Test

This function would make the UPS to do a short testing. This testing will last for 10 seconds.

Execution mode: press<Enter> in Main Menu for selecting “UPS 10Sec Test” and press”Esc” back to the main screen. This “Testing” will be shown in bar of “UPS Status”. In order to stop the test, please go back to “Main Menu” and select “UPS 10Sec Test” once again.

### 4.4.9 UPS Auto Test

This function will make the UPS to discharge the battery and to do the self-testing. The period of battery discharge is according to the setting in configuration menu.

### 4.4.10 View History File

This function could review the records of system history files. It includes date, time, input/output voltage, line frequency, load, UPS battery capacity, temperature and so on.

DATE	TIME	AC_in	Out	Hz	Load	Batt	°F
"04/06/1999"	"15:01"	107.0	125.0	60	2	100	75
"04/06/1999"	"15:02"	107.0	123.0	60	2	100	75
"04/06/1999"	"15:03"	107.0	125.0	59	2	100	75
"04/06/1999"	"15:04"	107.0	125.0	60	2	100	75
"04/06/1999"	"15:05"	107.0	125.0	60	2	100	75
"04/06/1999"	"15:06"	107.0	123.0	59	2	100	77
"04/06/1999"	"15:07"	107.0	125.0	60	2	100	75
"04/06/1999"	"15:08"	107.0	125.0	60	2	100	75
"04/06/1999"	"15:09"	107.0	123.0	60	2	100	77
"04/06/1999"	"15:10"	107.0	125.0	60	2	100	77
"04/06/1999"	"15:11"	107.0	123.0	60	2	100	77
"04/06/1999"	"15:12"	107.0	123.0	60	2	100	77
"04/06/1999"	"15:13"	107.0	125.0	60	2	100	77

### 4.4.11 View Log File

This function could review the records of system log files. It includes abnormal AC power, status of UPS and so on.

UPSilon LOG			
03/25/1999	22:16:49	*** UPSilon V2.0 ***	STARTED
03/26/1999	21:30:00	*** Shutdown File Server (Schedule) ***	
03/27/1999	00:42:34	*** UPSilon V2.0 ***	STARTED
03/27/1999	00:42:53	*** EXIT UPSilon ***	
03/27/1999	00:42:58	*** UPSilon V2.0 ***	STARTED
03/27/1999	00:46:16	*** EXIT UPSilon ***	
03/27/1999	01:00:47	*** UPSilon V2.0 ***	STARTED
03/27/1999	01:01:15	*** EXIT UPSilon ***	
03/29/1999	10:57:17	*** UPSilon V2.0 ***	STARTED
03/29/1999	10:57:26	*** EXIT UPSilon ***	
03/29/1999	11:51:33	*** UPSilon V2.0 ***	STARTED
03/29/1999	11:51:41	*** EXIT UPSilon ***	
03/29/1999	16:56:31	*** UPSilon V2.0 ***	STARTED

## 4.5 Broadcast Messages

When any power condition is detected, file server will broadcast messages to workstations. Here are the messages below:

**<WARNING> AC POWER FAIL, FS1 Shutdown in 10 min.**

UPSilon detects AC fail, start shutdown countdown.

---

**<Attention> FS1 will Shutdown in 1 minutes.**

Shut down warning of the last one minute.

---

**FS1 AC Power restored, Server won't be Shutdown.**

UPSilon detects AC power restored and the server won't be shut down.

---

**<Attention> UPS BATTERY LOW, FS1 Shut down in 1 min.**

UPSilon detects UPS battery low and the server will be shut down in one minute.

---

**Battery Low Recovered, Server won't be Shutdown.**

UPSilon detects UPS battery power low restored and the server won't be shut down.

---

**Battery Low Recovered, Server Shutdown in 2 min.**

UPS battery power low restored, but AC power still failed.

---

## 4.6 Shutdown Procedure

When an AC Failure or Battery Low occurs, or execute the “Scheduled ShutDown” or ”Shutdown UPS” function in “Main Menu”, UPSilon will execute shutdown procedures.

If you want to execute a command file before system shutdown, please create the file and save it as “RUPSDOWN.NCF” in SYS:SYSTEM. When execute shutdown procedures, UPSilon will execute “RUPSDOWN.NCF” first (if this file has been created). The time needed for executing “RUPSDOWN.NCF” can be set in “Duration of UPS Auto Testing” in “Configuration”. (See P30 for details of these settings)

## 5. UPSilon 2000 for Linux, FreeBSD

### 5.1 Feature

#### **Power Crisis Management**

- ◆ Utility Failure and Battery Low Detection
- ◆ Programmable System and UPS shutdown delay time
- ◆ Automatic system and UPS shutdown on power outages or before battery exhaustion
- ◆ Warning Messages sent to users at regular intervals prior to system shutdown
- ◆ Event Messages sent to manager by email or pager
- ◆ Unattended and scheduled system shutdown and automatic reboot
- ◆ User-defined batch job execution before system shutdown
- ◆ Power event notification for users and administrators

#### **UPS Management**

- ◆ UPS Preventive Maintenance - Initiate Self-tests to ensure the health of the UPS.
- ◆ UPS Battery Conservation – Put a network UPS on battery to sleep before the battery becomes depleted.
- ◆ Turn on, turn off, reboot or put the UPS to sleep straight from your console.



## **Power Management Utilities**

- ◆ Automatic installation procedure.
- ◆ Automatic background process initialization on startup
- ◆ Real-time graphical display of power/UPS status
- ◆ UPS power event logging
- ◆ Intuitive Parameter Configuration Editor
- ◆ Batch Job Execution before System Shutdown
- ◆ Simultaneous monitoring of several remote network UPSs
- ◆ Automatic Communication Port name detection
- ◆ Local monitoring through a cable attached to the system's RS232 serial port
- ◆ Local Network UPS monitoring through an SNMP agent (MIB OID {iso(1) org(3) dod(6) internet(1) private(4) enterprises(1) ppc(935)} )

## 5.2 Software Installation

1. Log in as the super-user.
2. Insert UPSilon CD in CD-ROM Driver.

### 【Example OS: FreeBSD 4.9】

- (1) Mount the UPSilon CD into file directory '/cdrom'  

```
# mount -t cd9660 /dev/acd0a /cdrom
```
- (2) Copy the files in directory '/cdrom' into '/tmp'  

```
# cp /cdrom/FreeBSD/FreeBSD-3.x/* /tmp
```
- (3) Unzip  

```
# tar -C /tmp -xzvf /tmp/bsd-3.Z
```
- (4) Change Directory ; Installation  

```
# cd /tmp/upsilon  
# ./install.bsd-3
```
- (5) Install program /FreeBSD-4.x/compat3.x/install.sh  

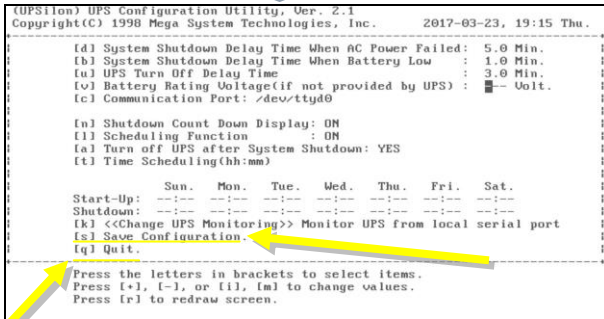
```
# cd /cdrom/FreeBSD/FreeBSD-4.x/compat3x  
# ./install.sh
```

Note : If the UPSilon has been installed in the FreeBSD v4.x by the 'UPSilon bsd-3.Z,' please install the "unix/patch/FreeBSD\_4.x/compat3.x/install.sh" of the setup CD. For even higher version, please update the system with 'compat3.x' from the WEB site)

- (6) Execute UPSilon parameter setting (Refer to 5.3)

# /etc/upsilon/upsilon config

Click [s] to save and click [q] to Quit



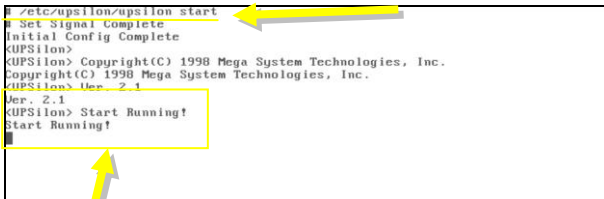
```

(UPSilon) UPS Configuration Utility, Ver. 2.1
Copyright(C) 1998 Mega System Technologies, Inc.      2017-03-23, 19:15 Thu.
-----
[d] System Shutdown Delay Time When AC Power Failed: 5.0 Min.
[h] System Shutdown Delay Time When Battery Low : 1.0 Min.
[u] UPS Turn Off Delay Time : 3.0 Min.
[v] Battery Rating Voltage(if not provided by UPS) :  Volt.
[c] Communication Port: /dev/ttyd0
-----
[m] Shutdown Count Down Display: OM
[l] Scheduling Function : OM
[a] Turn off UPS after System Shutdown: YES
[t] Time Scheduling(hh:mm)
-----
Sun. Mon. Tue. Wed. Thu. Fri. Sat.
Start-Up: ---:-- --:-- --:-- --:-- --:-- --:-- --:--
Shutdown: ---:-- --:-- --:-- --:-- --:-- --:-- --:--
[k] <<Change UPS Monitoring>> Monitor UPS from local serial port
[s] Save Configuration.
[q] Quit.
-----
Press the letters in brackets to select items.
Press [+], [-], or [l], [m] to change values.
Press [r] to redraw screen.

```

- (7) Start up UPSilon

# /etc/upsilon/upsilon start



```

# /etc/upsilon/upsilon start
# Set Signal Complete
Initial Config Complete
(UPSilon)
(UPSilon) Copyright(C) 1998 Mega System Technologies, Inc.
Copyright(C) 1998 Mega System Technologies, Inc.
(UPSilon) Ver. 2.1
Ver. 2.1
(UPSilon) Start Running!
Start Running!
#

```

## (8) Monitor UPS Status

# /etc/upsilon/upsilon status

```

(Upsilon) UPS Status Screen, Ver. 2.1
Copyright(C) 1998 Mega System Technologies, Inc.      2017-03-23, 20:55 Thu.
-----
<< [l] MONITOR LOCAL UPS >>
<< [r] MONITOR REMOTE UPS >>

<< Monitor a UPS which provides your computer's power >>
<< UPS may be connected to the NETWORK or to the SERIAL PORT >>
Press [enter]-Proceed, [r]-monitor Remote UPS, [q]-Quit

System: FreeBSD11

```

Select Local UPS

```

(Upsilon) UPS Status Screen, Ver. 2.1      Megatec UPS   In  UPS   XX3007BZ
Copyright(C) 1998 Mega System Technologies, Inc.      2017-03-23, 20:56 Thu.
-----
UPS Type      : On Line
UPS Rating Voltage: 220.0 Volt
UPS Rating Current: 30 Amp
UPS Line Frequency: 50.0 Hz
Communication Port: /dev/ttyd1

Input AC Power : Normal
Battery Status : Normal
UPS Functioning: Normal
Boost/Buck    : OFF
UPS Temperature: 30.1 C
UPS Self-Test  : Stop

Count Down Function: ON
Scheduling Function: OFF
Next Shutdown Time : ---:--
Next Restart Time  : ---:--
ACfail Shutdown Delay: 5.0 Min.
UPS Turn Off Delay : 3.0 Min.

UPS input Voltage: 220.1 Volt
180 190 200 210 220 230 240
UPS Output Voltage: 220.1 Volt
180 190 200 210 220 230 240
UPS Power Loading: 100%
0 20 40 60 80 100 120
UPS Battery Level: 100%
0 20 40 60 80 100 120
UPS Input Frequency: 50.0 Hz
0 20 40 60 80 90 100

System: FreeBSD11      Type 'r' to Redraw, Type 'q' to Quit

```

UPS Status

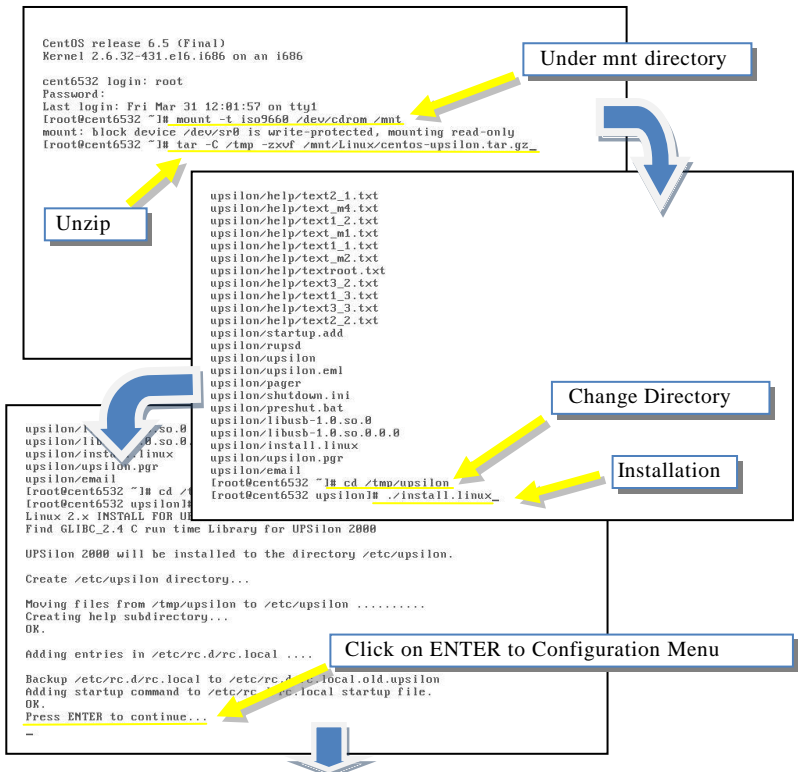
**【Example OS: Centos 6.5\_i386】**

- (1) Mount CD into file directory /mnt directory  

```
# mount -t iso9660 /dev/cdrom /mnt
```
- (2) Unzip to /tmp  

```
# tar -C /tmp -zxvf /mnt/Linux/centos-epsilon.tar.gz
```
- (3) Change directory ; Installation  

```
# cd /tmp/epsilon  
# ./install.linux
```



```

(UPSilon) UPS Configuration Utility, Ver. 2.1.02
Copyright(C) 2000 Mega System Technologies, Inc.      2017-03-31, 12:27 Fri.
-----
|
| [d] System Shutdown Delay Time When AC Power Failed: 5.0 Min. |
| [b] System Shutdown Delay Time When Battery Low : 1.0 Min. |
| [u] UPS Turn Off Delay Time : 3.0 Min. |
| [v] Battery Rating Voltage(if not provided by UPS) : --- Volt. |
| [c] Communication Port: /dev/ttyS1 |
|
| [n] Shutdown Count Down Display: ON |
| [I] Scheduling Function : OFF |
| [a] Turn off UPS after System Shutdown: YES |
| [t] Time Scheduling(hh:mm) |
|
| Sun. Mon. Tue. Wed. Thu. Fri. Sat. |
| Start-Up: ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- |
| Shutdown: ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- |
| [k] <<Change UPS Monitoring>> Monitor UPS from local serial port |
| [s] Save Configuration. |
| [q] Quit. |
|-----
|
| Press the letters in brackets to select items.
| Press [+], [-], or [I], [a] to change values.
| Press [r] to redraw screen.

```

```

|
| [t] Time Scheduling(hh:mm) |
|
| Sun. Mon. Tue. Wed. Thu. Fri. Sat. |
| Start-Up: ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- |
| Shutdown: ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- |
| [k] <<Change UPS Monitoring>> Monitor UPS from local serial port |
| [s] Save Configuration. |
| [q] Quit. |
|-----
|
| Press the letters in brackets to select items.
| Press [+], [-], or [I], [a] to change values.
| Press [r] to redraw screen.

```

Installation completed!

```

Start UPSilon 2000 background process...
Set Signal Complete
Initial Config Complete
<UPSilon>
<UPSilon> Copyright(C) 2000 Mega System Technologies, Inc.
Copyright(C) 2000 Mega System Technologies, Inc.
<UPSilon> Ver. 2.1.02
Ver. 2.1.02
<UPSilon> Start Running!
Start Running!
[root@cent6532 upsilon]# _

```

UPSilon Running

## 5.3. Paramerer Settings

### 5.3.1 Configure UPSilon for Linux, FreeBSD

UPSilon provides a full-screen editor for setting the parameters. The function key descriptions are at the bottom of the screen. You can type `‘/etc/upsilon/upsilon config’` at any time to configure UPSilon ◦

```
CentOS release 6.5 (Final)
Kernel 2.6.32-431.el6.i686 on an i686

cent6532 login: root
Password:
Last login: Fri Mar 31 16:06:13 on tty1
[root@cent6532 ~]# /etc/upsilon/upsilon config_
```



```
(UPSilon) UPS Configuration Utility, Ver. 2.1.02
Copyright(C) 2008 Mega System Technologies, Inc. 2017-03-31, 17:21 Fri.
```

```
-----
|d| System Shutdown Delay Time When AC Power Failed: 5.0 Min.
|b| System Shutdown Delay Time When Battery Low : 1.0 Min.
|u| UPS Turn Off Delay Time : 3.0 Min.
|v| Battery Rating Voltage(if not provided by UPS) : --- Volt.
|c| Communication Port: /dev/ttyS1
|
|n| Shutdown Count Down Display: ON
|l| Scheduling Function : OFF
|a| Turn off UPS after System Shutdown: YES
|t| Time Scheduling(hh:mm)
|
| Sun. Mon. Tue. Wed. Thu. Fri. Sat.
Start-Up: --:-- --:-- --:-- --:-- --:-- --:-- --:--
Shutdown: --:-- --:-- --:-- --:-- --:-- --:-- --:--
|k| <<Change UPS Monitoring>> Monitor UPS from local serial port
|s| Save Configuration.
|q| Quit.
-----
```

```
Press the letters in brackets to select items.
Press [+], [-], or [i], [m] to change values.
Press [r] to redraw screen.
```

```

(UPSilon) UPS Configuration Utility, Ver. 2.1.02
Copyright(C) 2008 Mega System Technologies, Inc.      2017-03-31, 17:21 Fri.
-----
[d] System Shutdown Delay Time When AC Power Failed:  5.0 Min.
[b] System Shutdown Delay Time When Battery Low      :  1.0 Min.
[u] UPS Turn Off Delay Time                          :  3.0 Min.
[v] Battery Rating Voltage(if not provided by UPS)   :  --- Volt.
[c] Communication Port: /dev/ttyS1

[m] Shutdown Count Down Display: ON
[l] Scheduling Function                             : OFF
[a] Turn off UPS after System Shutdown: YES
[t] Time Scheduling(hh:mm)

          Sun.   Mon.   Tue.   Wed.   Thu.   Fri.   Sat.
Start-Up:  ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- ---:--
Shutdown:  ---:-- ---:-- ---:-- ---:-- ---:-- ---:-- ---:--
[k] <<Change UPS Monitoring>> Monitor UPS from local serial port
[s] Save Configuration.
[q] Quit.
-----
Press the letters in brackets to select items.
Press [+], [-], or [i], [m] to change values.
Press [r] to redraw screen.

```

### ☞ Option Description:

#### **[d] System Shutdown Delay Time When AC Power Failed:**

This is to configure time require to save files and logout before the system shutdown when utility failure occurs. UPSilon will send periodic alerts to users to inform them about the impending system shutdown every minute based on this setting. When countdown ends, the system will be shut down. Maximum value is 24 hours , minimum value should not less than the battery low delay time [b]

#### **[b] System Shutdown Delay Time When Battery Low:**

This is to configure delay time when battery low occurs during power failure countdown. This is usually shorter than the utility failure delay time since the UPS battery is almost



depleted. Minimum value is 1 minute , maximum value should not be greater than the delay time when AC power fails [d]

**[u] UPS Turn Off Delay Time:**

This is delay time before the UPS stops providing output power. It has to be long enough to make sure the UNIX system can be shut down completely. The turn off command is issued to the UPS at the same time when system begins the shutdown process. This delay time can be: 0.2, 0.3, ... 0.9, 1.0, 2.0, 3.0, ...10.0 minutes.

**[v] Battery Rating Voltage(if not provided by UPS):**

This only to be configure if UPS does not provide rating voltage and when UPS is connecting to the COM port directly. Please refer to UPS's user manual for such configuration

**[c] Communication Port:**

This is to configure the COM port between UPS and software. UPSilon offers the general communication ports that are compatible for UNIX and Linux system. Communication ports are named differently on UNIX and Linux. Table below for reference

Communication Port		
LINUX	WINDOWS	FREEBSD
/dev/ttyS0	COM1	/dev/ttyd0
/dev/ttyS1	COM2	/dev/ttyd1
/dev/ttyS2	COM3	/dev/ttyd2
/dev/ttyS3	COM4	/dev/ttyd3

Note: If using M2902/M2905 cable with Linux system, please configure communication port as hid

If wrong communication port configured, UPSilon will try to detect automatically and shows message of

*'UPS Adapter No Response'*

### **Communication Port Problem Solution**

When executing UPSilon for Unix and message of *"UPS adapter no response"*, please refer to the solution below °

#### **Example OS : SUN**

1. Ensure no other program(process) is using the same port
2. Turn off "getty" feature of such port

Check if such text is show under `'/etc/ttytab'`

```
ttya "/usr/etc/getty std.9600" unknown off local  
secure
```

If modify the content of `/etc/ttytab'` , please follow the command below and it will close programe and restart terminals.

```
kill -hup 1
```

3. Enter command below to change the propt of `'/dev/ttya'`  

```
chmod 666 /dev/ttya
```

**[k] <<Change UPS Monitoring>>**

Set this value to *Monitor UPS from local serial port* if the UPS providing your computer's power is connected to your system's serial port.

Set option [k] to *Monitor local UPS SNMP agent* if you intend to use UPSilon to monitor a UPS attached to a local SNMP agent. The host computer (this computer's IP address) should have read-write access right to the SNMP agent.

**[o] Community Name**

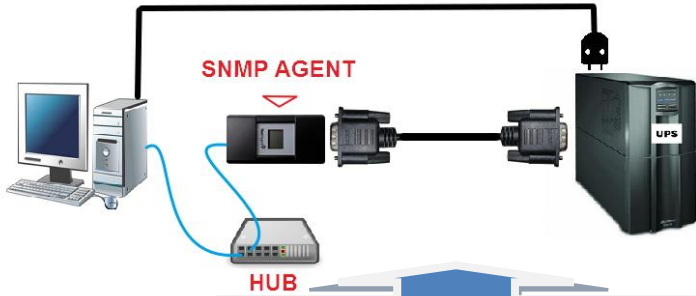
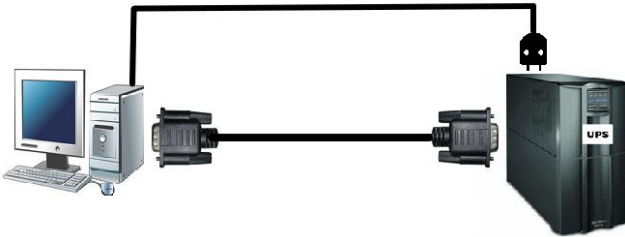
The community name should correspond to a community known to the UPS SNMP agent.

**[p] Ip Address**

The target SNMP Agent IP address.

```
[o] Community Name : public
[p] Ip Address     : 203.73.69.244
[ca] Shutdown_Count_Down_Disclosure: ON
```

*Monitor UPS from local serial port.*



*Monitor local UPS SNMP agent*

**[n] Shutdown Count Down Display:**

Set this value to ON if you want users to receive periodic alerts before system shutdown. Set this value to OFF if otherwise.

**[l] Scheduling Function:**

Set this value to ON if you want to schedule unattended system shutdown and automatic reboot. Set this value to OFF if otherwise. Setting this value to OFF will also stop an impending scheduled system shutdown.

**[a] Turn off UPS after System Shutdown**

Set this value to YES if you want UPSilon to turn off the UPS after shutting down the system. Set this value to NO If you want the UPS to continue providing output power until it's batteries get drained. UPSilon would not be able to reboot the system automatically if this value was set to NO.

**[t] Time Scheduling(hh:mm)**

Set various startup and shutdown times for every day weekly. UPSilon powers down and reboots the system based on this preset weekly schedule. When the scheduled time to shutdown approaches, UPSilon will send periodic alerts to inform users to save files, close jobs and log out of the system.

[t] Time Scheduling(hh:mm)	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
Start-Up:	04:00	06:00	05:00	07:00	08:00	09:00	00:00
Shutdown:	23:00	23:00	23:30	00:00	22:10	21:00	18:00

**[s] Save Configuration.**

Saves all modified parameters

**[q] Quit.**

Quit configuration without saving changes.

.

### 5.3.2 Event Notice by Email

UPSilon provides event notice functions. These functions enable you to know the updated power events by email or pager.

After UPSilon for UNIX is installed, it generates 2 files of “upsilon.eml” and “upsilon.pgr”. This is to configure to send email and pager.

If to send email notification when AC failed, Utility recovered, Battery Low..etc, then enter the file format as below.

**/etc/upsilon/upsilon.eml**'s content as below :

```
abcd.com.tw           ←SMTP server address
marry                 ←Recipient email address
@abcd.com.tw
#mark@cccc.com.tw ←This is not to send to the recipient
```

When AC failed, recipient would have email notification as below:

```
Linux[Linux.abcd.com.tw] 99-07-01,12:28 AC Fail
      System Name      Time of event   Event
```

### 5.3.3 Event Notice by Pager

This is to send notification by pager. UPSilon will try to dial telephone or pager numbers according to the file named

`/etc/upsilon/upsilon.pgr`

This is also a plain text file , words in the first line denotes the pager port UPSilon will use when power event occurs , line(s) between the first and the second lines with a '~' mark leading to denote the pager number(s) UPSilon will dial when utility is fail , line(s) between the second and the third lines with a '~' mark leading to denote the pager number(s) UPSilon will dial when utility recover , line(s) between the third and the fourth lines with a '~' mark leading to denote the pager number(s) UPSilon will dial when battery capacity is about to deplete , line(s) below the fourth line with a '~' mark leading to denote the pager number(s) UPSilon will dial when battery capacity recover , so , the content of `upsilon.pgr` will looks like

```
/dev/ttyS0
~AC FAIL
0957608176,,,,#1331111#
~AC RECOVER
0957608176,,,,#1332222#
0931726768,,,,#1332222#
~BATTERY LOW
0957608176,,,,#1333333#
~BATTERY LOW RECOVER
0957608176,,,,#1334444#.
```

### 5.3.4 Shutdown Batch Job

UPSilon provides a batch job function. This function enables you to execute some processes before system shutdown. The filename is:

`/etc/upsilon/preshut.bat`

This is a plain text file. Use any editor to add or modify commands in this file. Add comments by placing a leading '#' to the line

### 5.3.5 Shutdown Command File

This file contains the command needed to shut down the system. The filename is:

`/etc/upsilon/shutdown.ini`

This file contains only one line of command. Please refer to your system's operation manual before making any modifications. **Be sure the command could actually shut down your system**



## 5.4 Using UPSilon for Linux, FreeBSD

### 5.4.1.Using UPSilon for Linux,FreeBSD

After a successful installation, UPSilon will become a background process at system startup. It is not necessary to start the background process manually. UPSilon automatically detects and applies the modifications made in the configuration menu. Use these commands to execute any of the six options provided in the `upsilon` program :

- Start up UPSilon for Linux, FreeBSD :

**`/etc/upsilon/upsilon start`**

- Stop UPSilon for Linux, FreeBSD :

**`/etc/upsilon/upsilon stop`**

- Parameter Setting:

**`/etc/upsilon/upsilon config`**

(Refer to 5.3)

- Monitor UPS Status:

**`/etc/upsilon/upsilon status`**

(Refer to 5.5)

- Send command to UPS directly :

**`/etc/upsilon/upsilon issuer`**

(Refer to 5.6)

- Read Online Help :

## /etc/upsilon/upsilon help

```
(UPSilon) UPS ONLINE HELP, Ver. 1.3
Copyright(C) 1998 Mega System Technologies, Inc.      98-01-15, 17:18 Thu.
-----
1.) Introduction
2.) Installation
3.) Configuration
4.) Using UPSilon For UNIX
5.) Monitoring the UPS Status
6.) Control your UPS
7.) History Information
   a.) Appendix A - File List and Disk Contents
   b.) Appendix B - System Parameters
   c.) Appendix C - RUPS II FAQ
-----
Press the corresponding letters or numbers to know more about the
topics listed on your screen.
Press [q] to quit
```

In case you forgot any of the commands, just type “*upsilon*”. A short description of each program option would appear on the screen.

```
#
# upsilon
One argument needed!
Usage: upsilon [start|stop|config|status|issuer|help]

upsilon start   - Start the Daemon process
upsilon stop    - Terminate Resident Daemon process
upsilon config  - Modify Time Settings
upsilon status  - Monitor UPS status
upsilon issuer  - Send Commands to the UPS
upsilon help    - Display Online User Manual
#
```

## 5.4.2 Remove UPSilon for Linux, FreeBSD

Follow these steps to uninstall UPSilon.

1. Stop the UPSilon daemon process.  
(type “/etc/upsilon/upsilon stop”).
2. Remove the directory ‘/etc/upsilon’.
3. Remove the UPSilon startup process from the system.

*If your Operating System is:*

### **A. Linux**

Remove or mark the whole line containing this string in the file ‘/etc/rc.d/rc.local’:

*/etc/upsilon/upsilon start*

### **B. FreeBSD**

Remove or mark the whole line containing this string in the file ‘/etc/rc’:

*/etc/upsilon/upsilon start*

## 5.5 Monitor UPS Status

The UPSilon Status screen provides a visual status-check of important operating data such as input/output voltage, current, battery capacity, power loading and much more. You could monitor your local UPS while simultaneously monitoring several network UPSs

### **Monitor Local UPS**

1. Enter “/etc/upsilon/upsilon status”
2. Select.[ 1 ] MONITOR LOCAL UPS

```
CentOS release 6.5 (Final)
Kernel 2.6.32-431.el6.i686 on an i686

cent6532 login: root
Password:
Last login: Wed Apr  5 09:13:07 on tty1
[root@cent6532 ~]# /etc/upsilon/upsilon status_
```



```
(UPSilon) UPS Status Screen, Ver. 2.1.02
Copyright(C) 2008 Mega System Technologies, Inc.      2017-04-05, 09:11 Wed.
-----
|
|
|  <<< [1] MONITOR LOCAL UPS >>>
|
|  <<< [r] MONITOR REMOTE UPS >>>
|
|
|
|
|
|
|
|
|
|  << Monitor a UPS which provides your computer's power >>
|  << UPS may be connected to the NETWORK or to the SERIAL PORT >>
|  Press [enter]-Proceed, [r]-monitor Remote UPS, [q]-Quit
|
|-----
System: Linux|cent6532|
```

```

(UPSilon) UPS Status Screen, Ver. 2.1.02 Megatec_UPS      BEST_UPS  113007BZ
Copyright(C) 2000 Mega System Technologies, Inc.        2017-04-05, 09:12 Wed.
-----+-----+-----+-----+-----+-----+-----+-----+-----+
: UPS Type           : On Line           ||           UPS Input Voltage: 220.1 Volt   :
: UPS Rating Voltage: 220.0 Volt        ||           ██████████-----|-----|--- :
: UPS Rating Current: 30 Amp            || 100 150 200 210 220 230 240           :
: UPS Line Frequency: 50.0 Hz          ||           UPS Output Voltage: 220.1 Volt   :
: Communication Port: /dev/ttyS1       ||           ██████████-----|-----|--- :
:                                     || 100 150 200 210 220 230 240           :
:   Input AC Power  : Normal            ||           UPS Power Loading: 100%         :
:   Battery Status  : Normal            ||           ██████████-----|-----|--- :
:   UPS Functioning: Normal            ||           0  20  40  60  80 100 120       :
:   Boost/Buck      : OFF               ||           UPS Battery Level: 100%         :
:   UPS Temperature: 30.1 C            ||           ██████████-----|-----|--- :
:   UPS Self-Test   : Stop              ||           0  20  40  60  80 100 120       :
:                                     ||           UPS Input Frequency: 50.0 Hz    :
: Count Down Function: ON              ||           ██████████-----|-----|--- :
: Scheduling Function: OFF              ||           0  20  40  60  80 100 120       :
: Next Shutdown Time: --- --:--       ||           UPS Turn Off Delay : 3.0 Min.    :
: Next Restart Time : --- --:--       ||           ██████████-----|-----|--- :
: ACFail Shutdown Delay: 5.0 Min.      ||           0  20  40  60  80  90 100       :
: UPS Turn Off Delay : 3.0 Min.        ||           ██████████-----|-----|--- :
:                                     ||           0  20  40  60  80  90 100       :
-----+-----+-----+-----+-----+-----+-----+-----+
System: Linux[cent6532]                Type 'r' to Redraw, Type 'q' to Quit._

```

## Local UPS Status

### ☞ Monitor Remote UPS

1. Enter “/etc/upsilon/upsilon status”
2. Select.[ r ] MONITOR REMOTE UPS
3. [ i ] to enter SNMP card’s IP address
4. [ c ] to configure SNMP card community Name

```

CentOS release 6.5 (Final)
Kernel 2.6.32-431.el6.i686 on an i686

cent6532 login: root
Password:
Last login: Wed Apr  5 09:13:07 on tty1
[root@cent6532 ~]# /etc/upsilon/upsilon status_

```

```

(UPSilon) UPS Status Screen, Ver. 2.1.02
Copyright(C) 2000 Mega System Technologies, Inc.      2017-04-05, 11:20 Wed.

<< [l] MONITOR LOCAL UPS >>

<<< [r] MONITOR REMOTE UPS >>>

[l] IP Address      : 192.168.0.100_
[l] Community Name : public

<< The IP Address of the SNMP Agent connected to the UPS. >>
Enter the IP Address of the SNMP Agent.
Press [BKSP] to delete a character, press [enter] when through.

System: Linux[cent6532]

```

Once done, click [Enter], and UPS Status would show as below

```

(UPSilon) UPS Status Screen, Ver. 2.1.02 ""REMOTE_UPS""
Copyright(C) 2000 Mega System Technologies, Inc.      2017-04-05, 11:38 Wed.

Ip Address      : 192.168.0.100_
Community Name  : public
Input AC Power  : Normal
Battery Status  : Normal
Boost/Buck     : OFF
UPS Temperature : 26.1 C
UPS Self-Test   : Stop

Time on Battery : 0 Sec.
Battery Voltage : 27.1 Volts
Rating Voltage  : 24.0 Volts
Last Spike      : 220.1 Volts
Last Sag        : 220.1 Volts
Last Failure Cause : no transfer

Next Shutdown Time : --- --:--
Next Restart Time  : --- --:--
ACfail Shutdown Delay : --- Min.
UPS Turn Off Delay : --- Min.

UPS Input Voltage: 220.1 Volt
180 190 200 210 220 230 240

UPS Output Voltage: 220.1 Volt
180 190 200 210 220 230 240

UPS Power Loading: 50%
0 20 40 60 80 100 120

UPS Battery Level: 100%
0 20 40 60 80 100 120

UPS Input Frequency: 50.0 Hz
0 20 40 60 80 90 100

System: Linux[cent6532]      [r]-Redraw, [m]-More, [q]-Quit

```

Click on [m] to obtain more SNMP card's information such as System Name, System Location

Click on [b] to return to the main menu

```
(Upsilon) UPS Status Screen, Ver. 2.1.02 ""REMOTE_UPS"
Copyright(C) 2000 Mega System Technologies, Inc.      2017-04-05, 12:07 Wed.
-----
| System Contact      : "Administrator."             |
| System Name        : "UPS Agent."                 |
| System Location    : "My Office."                 |
|-----|-----|
| Date Made          : ""                            |
| Serial #           : ""                            |
| Agent Rev.         : "3.5.BY506"                  |
| Batt. Replace Date: ""                            |
| Batt. Replace Flag: 0                             |
| Batt. Current      : 0                             |
| Input Phase        : 1                             |
| Output Phase       : 1                             |
| Devices Attached   : 4                             |
| Rated Output Volt.: 2200                           |
| High Transfer Volt: 0                             |
| Low Transfer Volt.: 0                             |
| Alarm Flag         : 3                             |
| Alarm Timer        : 2147483647                   |
| Min. Ret. Cap.    : 0                             |
|-----|-----|
| System: Linux[cent6532]                            |
|-----|-----|
| [r]-Redraw, [b]-Back, [q]-Quit                    |
```







- **[u] Reboot UPS**

UPS shuts off then turns back on.

- **[l] Put UPS to Sleep**

Specify the duration of sleep using [+] and [-] keys. UPS will not provide output power while in sleep mode.

- **[m] Simulate Power Fail**

- UPS switches to battery power.

- **[b] Conserve Battery**

- UPS on battery goes to sleep mode.

- **[d] Diagnostic Self Test**

- UPS performs a short diagnostic self test.

- **[t] Test Run Time Calibration**

The UPS discharges it's batteries until capacity is less than 25%

- **[f] Flash and Beep**

- UPS lights all indicators and beeps.

- **[I] Test Indicators**

UPS performs a front panel lights test.

## 5.7 History Information

UPSilon records all power events in the file `/etc/upsilon/rupslog`. You could review this information to check if there was any occurrence of power failure.

Use any text editor to open the file `"/etc/upsilon/rupslog"`

```
System will be shut down in 1316 Minutes! - Mon Jan 12 15:51:10 1998
System will be shut down in 1315 Minutes! - Mon Jan 12 15:52:10 1998
System will be shut down in 1314 Minutes! - Mon Jan 12 15:53:10 1998
System will be shut down in 1313 Minutes! - Mon Jan 12 15:54:10 1998
System will be shut down in 1312 Minutes! - Mon Jan 12 15:55:10 1998
System will be shut down in 1311 Minutes! - Mon Jan 12 15:56:10 1998
System will be shut down in 1310 Minutes! - Mon Jan 12 15:57:10 1998
UPS Battery low! - Mon Jan 12 15:57:25 1998
System will be shut down in 1 Minute! - Mon Jan 12 15:57:26 1998
Preshut processes all done! - Mon Jan 12 15:58:26 1998
AC Power Fails! UPS provides power! - Mon Jan 12 16:08:07 1998
System will be shut down in 26 Minutes! - Mon Jan 12 16:08:09 1998
AC Power recovered! - Mon Jan 12 16:08:32 1998
Shutdown Stops! System Returns to Normal State! - Mon Jan 12 16:08:32 1998
Scheduled time to shutdown! - Mon Jan 12 16:11:23 1998
System will be shut down in 1 Minute! - Mon Jan 12 16:11:27 1998
Shutdown Stops! System Returns to Normal State! - Mon Jan 12 16:12:02 1998
Scheduled time to shutdown! - Mon Jan 12 16:14:54 1998
Preshut processes all done! - Mon Jan 12 16:15:02 1998
AC Power Fails! UPS provides power! - Wed Jan 14 18:29:19 1998
System will be shut down in 5 Minutes! - Wed Jan 14 18:29:52 1998
AC Power recovered! - Wed Jan 14 18:29:54 1998
Shutdown Stops! System Returns to Normal State! - Wed Jan 14 18:29:54 1998
```

## 5.8 File List

<b>OS</b>	<b>File Name</b>
Linux	<b>linux.Z</b> <b>centos-upsilon.tar.gz</b> <b>linux-upsilon-x64.tar.gz</b> <b>linux-upsilon.tar.gz</b>
FreeBSD 2.X	<b>bsd-2.Z</b>
FreeBSD 3.X	<b>bsd-3.Z</b>

## 5.9 Instruction to mount CD-ROM

<b>OS</b>	<b>Command</b>	<b>Parameters</b>	<b>Device Name</b>	<b>Directory</b>
Linux	mount	-t iso9660	/dev/cdrom	/mnt/cdrom
FreeBSD	mount	-t cd9660	/dev/acd0a	/mnt/cdrom

## 5.10 System Parameters

OS	COM Port	Shutdown Command	Start up File
Linux	/dev/ttyS1	/sbin/halt	/etc/rc.d/rc.local
FreeBSD	/dev/ttyd1	Shutdown -h now	/etc/rc

### 5.11 FAQ

**Q1** UPSilon works fine when manually activated but an error message "UPS adapter no response!" appears when the system activates it at start-up.

Answer:

Make sure no other process uses the same serial port as UPSilon daemon.

**Q2.** I tried running the UPSilon on FreeBSD Unix system, but it doesn't work, why?

Answer:

UPSilon uses Unix IPC (Inter Process Communication) functions. FreeBSD does support System V IPC primitives, but you must install this option first. Add the following lines to your kernel config to enable Inter Process Communication.

```
options SYSVSHM
options "SHMMAXPGS=64" # 256Kb of sharable memory
options SYSVSEM      # enable for semaphores
options SYSVMSG      # enable for messaging
```

**Q3.** When executing UPSilon for Linux, FreeBSD , message of 'Cannot Initialize the SNMP Session!!' appears , what to do ?

Answer :

Check following :

- a. If IP address and Community Name are correct ◦
- b. If cable is correctly well connected