ATS OWNER'S MANUAL

IT Solutions Provider

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Content

1. ATS Overview

The ArcTiv Automatic Transfer Switch (ATS) is a highly reliable switch that provides redundant power to connected equipment.   If the primary power source becomes unavailable, the ATS will seamlessly switch to the secondary power source automatically.   ATS products are offered in basic and intelligent types.   The user can upgrade the basic ATS to an intelligent model by inserting a hot swappable Network Management Card, which enables the user to monitor and manage the ATS via web interface or SNMP browser.

2. Functional Description

1. **Switching:**   Switch over between Source A and Source B automatically, transfer time 10≤16ms

2. **Monitoring:**   Load current; input and output voltage; source A and source B power input; device status

3. **Remote Controlling:**   Switch over between Source A and Source B.   Set the threshold for the total load current and input voltage.

4. **Automatic Alarms:**   Triggers when thresholds are exceeded

5. **System Default Alarming:**   When total load current/voltage exceed the limit value, when only single source power up when automatically switching occur

6. **Alarming Method:**   Buzz and flesh alarming.   E-mail alarming(only intelligent type)

7. **Log Recording:**   record and save the log of the device running and alarming information.   User can view and export the data history

8. **System Support:**   Single user operation system, support software update

9. **Account Management:**   set the authorization of the account

10. **Access Method:**   Ethernet connection, web interface through IE browser, SNMP(V1), access and control through standard network management, Serial Connection (Modbus protocol by defaulted)

11. **System Settings:**   system time, lock devices, voltage threshold, transfer time.

3. Applications

ATS series product are compliant to the physical requirements of server racks, network cabinets, etc.   ATS series products are in accordance with the regulation of RoHS.

4. Product Schematic

Basic ATS (1U)

Basic ATS (2U)
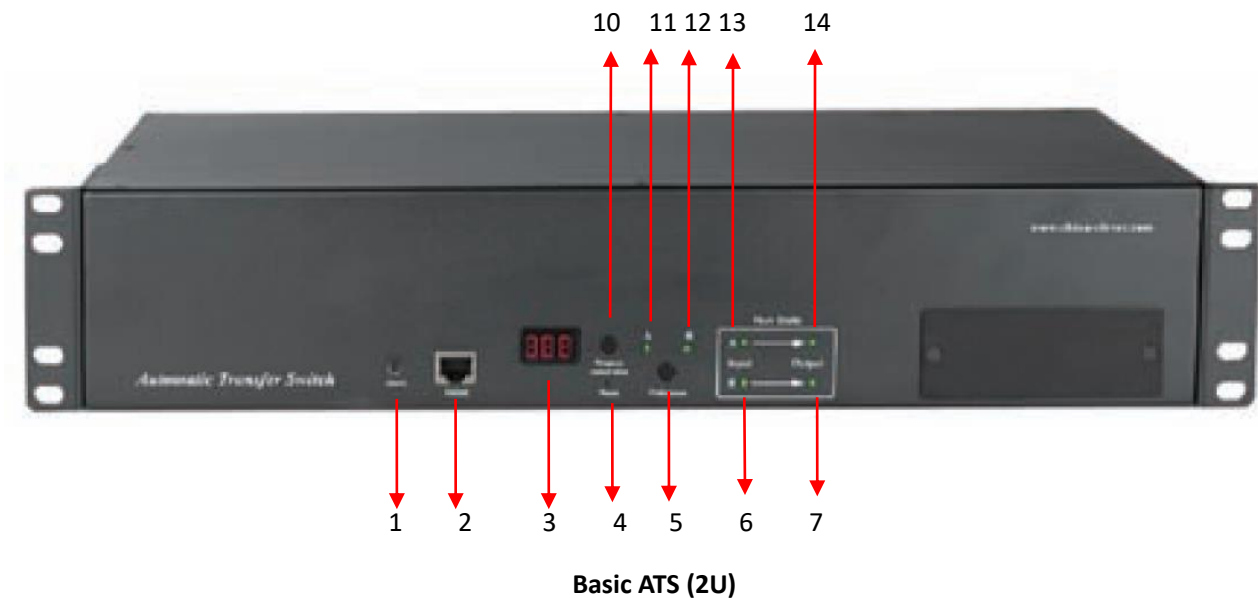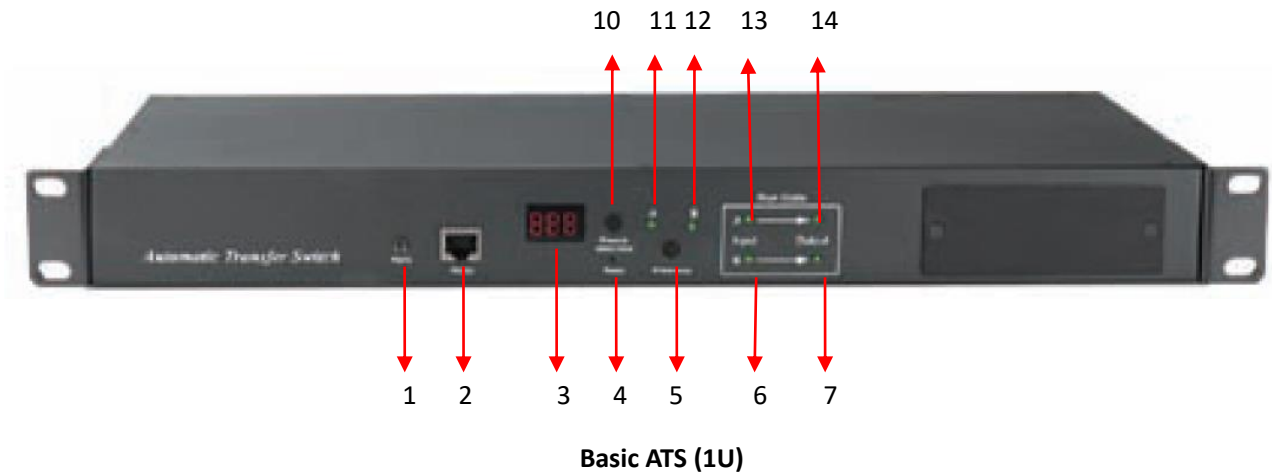
1. Alarm: the port of buzz and flesh, used to connect to external annunciator

2. RS485:   Serial communication port, connect the device to local PC

3. LED screen: display the current; voltage; IP address and hardware version

4. Reset: Rest button

5. Preference: to select the preferred power source

6. Input indicator of source B

7. Output indicator of source B

8. RUN: Operation indicator

9. NET: Ethernet Port

10. Press to select data: To view power date and information

11. Preference indicator of source A

12. Preference indicator of source B

13. Input indicator of source A

14. Output indicator of source A

5 Mounting Method

Horizontal rack mounting.   Choose a suitable installation location for the ATS which occupies 1 or 2 RMU rack space.   Insert cage nuts on each EIA vertical mounting rail in your rack.
Align the bracket's mounting holes with the cage nuts.   Insert and tighten the screws.
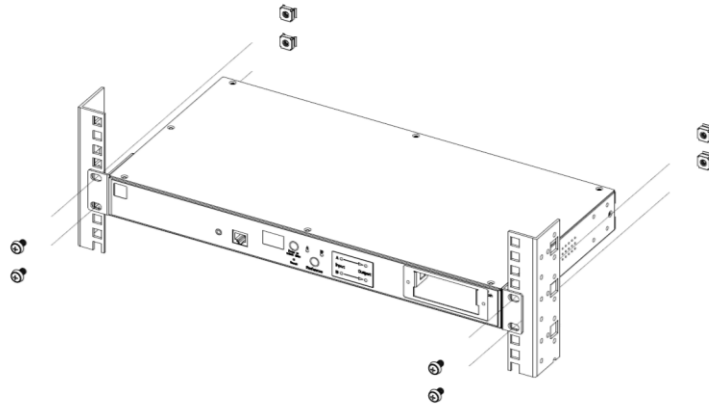
6 Hardware Introduction

6.1 Self-check when powering on

The buzzer beeps once when powering on.   The LED indicator always lights on, digital screen display load current after self-checking **8.8.8.**

6.2 Operation status viewing

Through the "press to select date" button, the user can view the voltage, IP address (only intelligent type) and device version number.

6.3 Select the preferred power source

Use the Preferred button to select the primary power source.   The user has 3 options:
1. Set the source A as the preferred power source
2. Set the source B as the preferred power source
3. Leave open

The corresponding indicator will always light on if a selection was made.   If not, the two indicators will remain off.   Please note that with the intelligent ATS Lock function, if the user cannot complete the setting above, please log on to the Web interface to unlock.

6.4 Reset operation

To manually reset the ATS, Press the Reset button to reset the device without affecting the outlet status.

6.5 Restore to factory settings

Press and hold the "press to select data" button for 6 seconds, the LED screen will display "IP" when released.   Then press Reset to restore the default IP 192.168.1.163, User name and password.

6.6   Serial connection

Using the supplied serial cable, insert the RJ45 connector to the RS485 communication port and connect the other end to the serial port of a local PC.

6.7   External speaker connection

Use the supplied terminal to connect the external speaker.   The max voltage of 50VDC and load current of 5A

6.8   Ethernet connection (only intelligent type)

Using the supplied network cable, connect one side to the NET port of the device and the other end to the network.

6.9   The software or hardware update method

6.9.1   Save the software update file   ATS.hex   provided by supplier to the local PC.

6.9.2   Open the software update file   philips_flash_ut... WinRAR ZIP 压缩文件 2,058 KB   , double-click the setup.exe file to install

6.9.3   Run the software as below when the installation is finished.
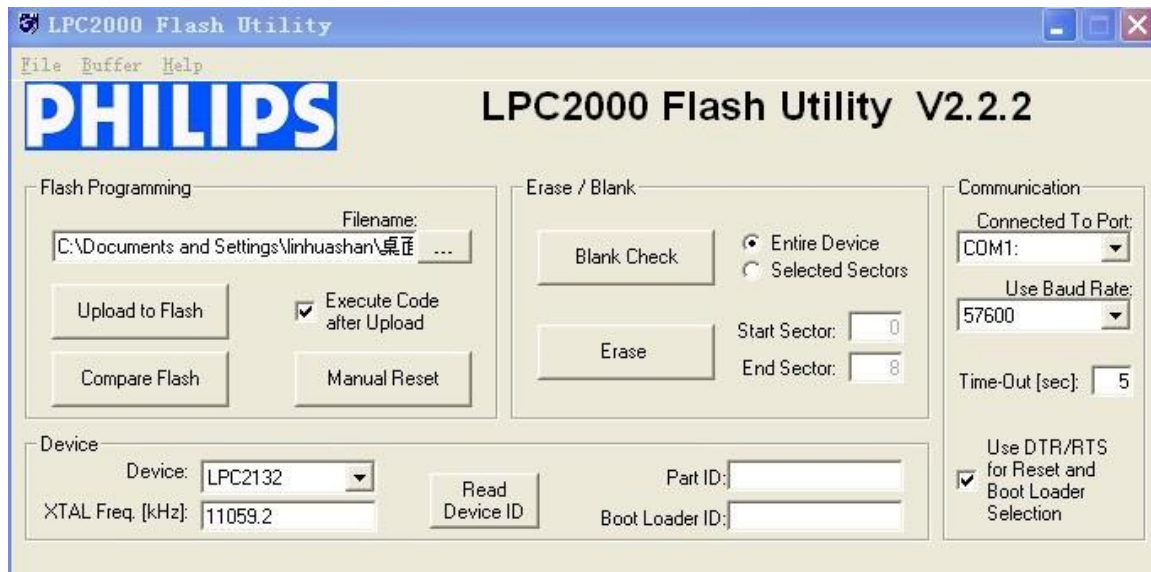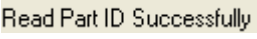

6.9.4   Insert the RJ45 connector of the update signal cable into the RS485 port of the ATS front panel, connect the other end to the port COM1 of local PC.
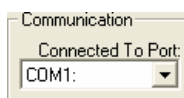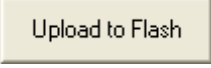
6.9.5   Select the serial port are using   COM1:   , other items please refer to the above pictures.

6.9.6 Click the [···] from [Flash Programming — Filename: [ ] [···]] and submit the file [ATS.hex] to the frame

6.9.7 Power on the ATS.

6.9.8 Click [Read Device ID], [Read Part ID Successfully] will be displayed on the interface if read success.   If not, please double-check the cable connection and communication port.

6.9.9 Click [Erase] , [Erased LPC2000 Flash Successfully] will be displayed on the interface if erase success, if not, please double-check the cable connection and communication port

6.9.10 Click [Upload to Flash] , [Executing Uploaded Code] will be displayed on the interface if loading success. If not, please double check the cable and communication port

6.9.11 Power off the ATS.

6.9.12 Power on on the ATS, digital screen will display the new hardware version number, it can perform normal communication after software update success.

7   Hyper Terminal User Guide

7.1   Using the supplied serial cable, connect one end to the RS485 port and the other end to serial port of

local PC.   Running the Hyper terminal program (like Windows Hyper terminal), click:

Start → Programs → Accessories → Communication → Hyper Terminal

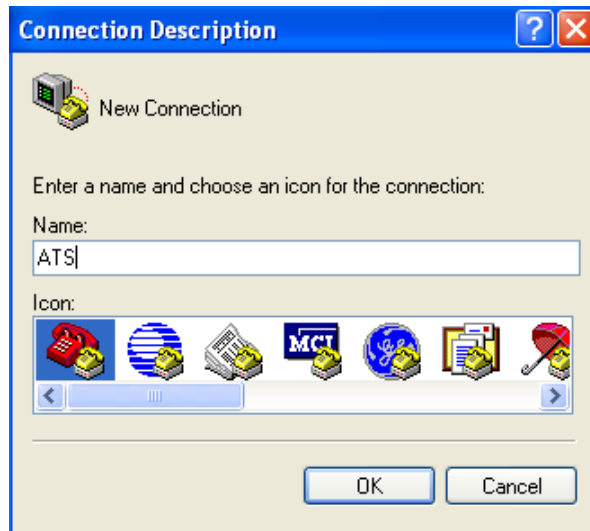7.2   The dialog box as below will pop up if it is the first time that the PC has run the Hyper Terminal
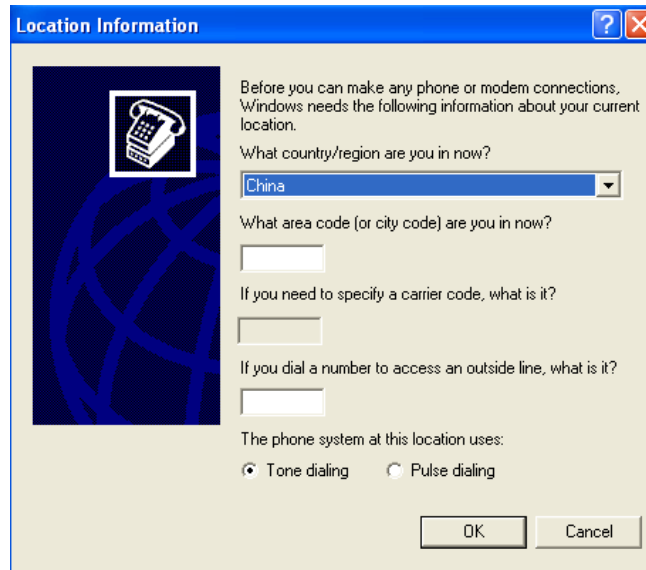
7.3   Enter one or several numbers at random when it requires your area code, for instance 0755 and click

OK.
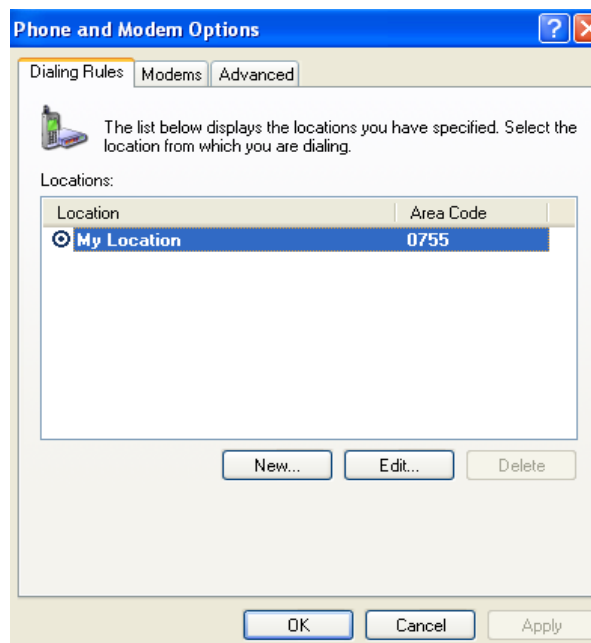
7.4 The link description window will pop-up as below:

7.5 Enter a Device Name (such as ATS) and click OK.

7.6 Select the COM port that will be used and click OK.

7.7   Set the baud rate of ATS as 19200 and enter configuration information for data bits, parity and flow
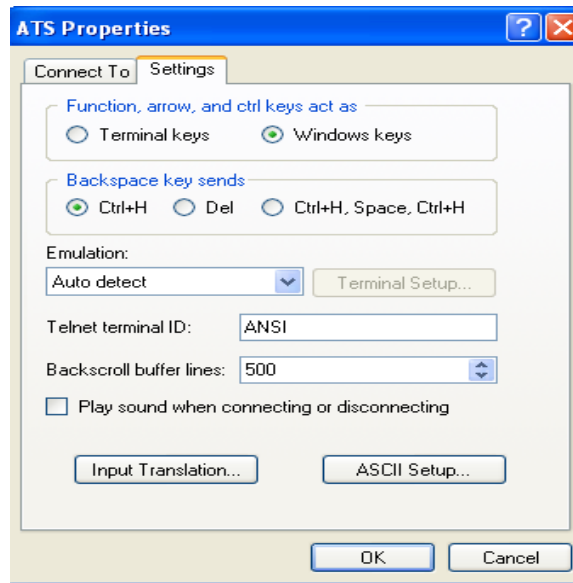
control as provided below.   Then click OK.
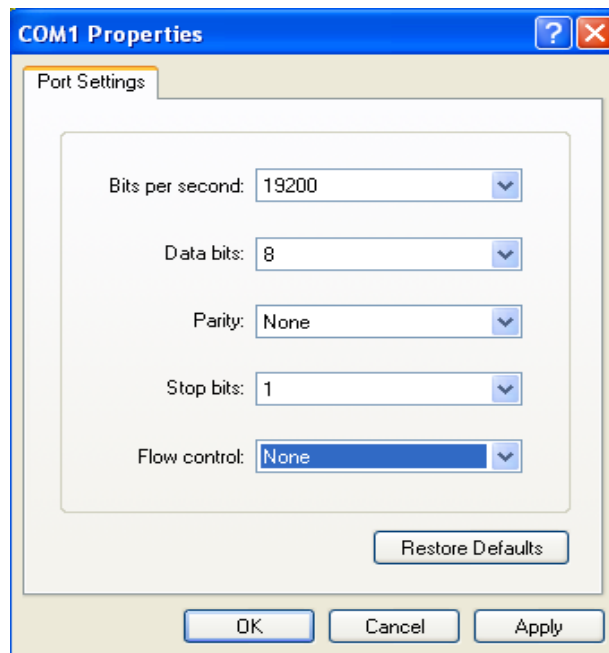
7.8   If it is not the first time that the PC has run the Hyper Terminal, it will go directly to the window as in

item 4 of this section.   Follow instructions 4 – 7 and enter the Hyper Terminal monitoring interface as below:
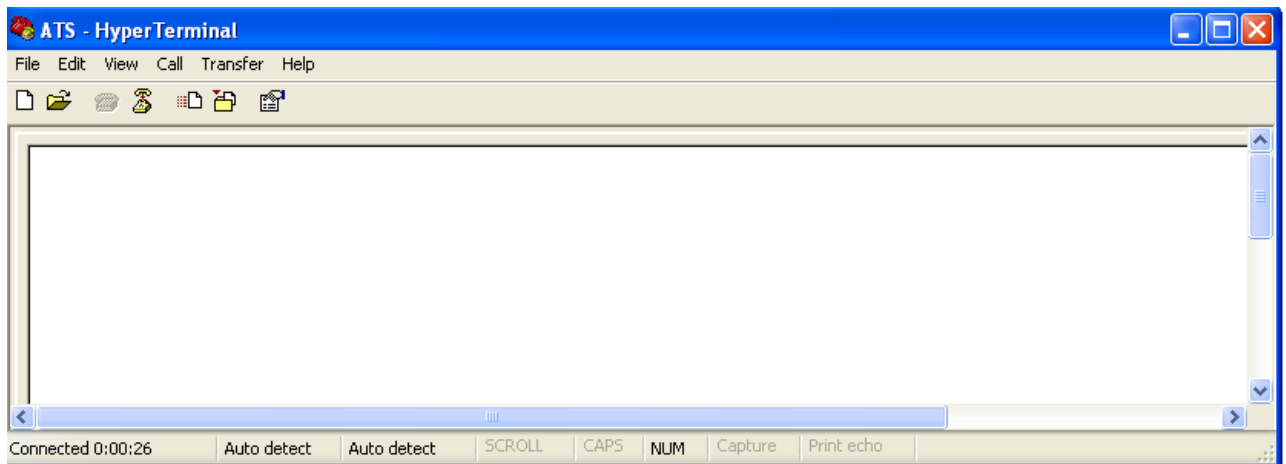
7.9   Setup ASCII Code

7.9.1   Click the file in the main menu and select attributes or click on the icon directly.

7.9.2   Click on ASCII Setup
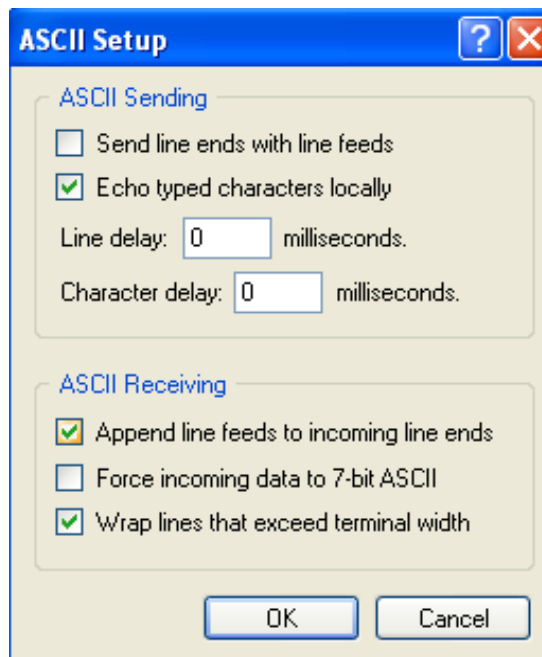
7.9.3 Tick the boxes as window above, then click the OK button and return to the monitoring interface.
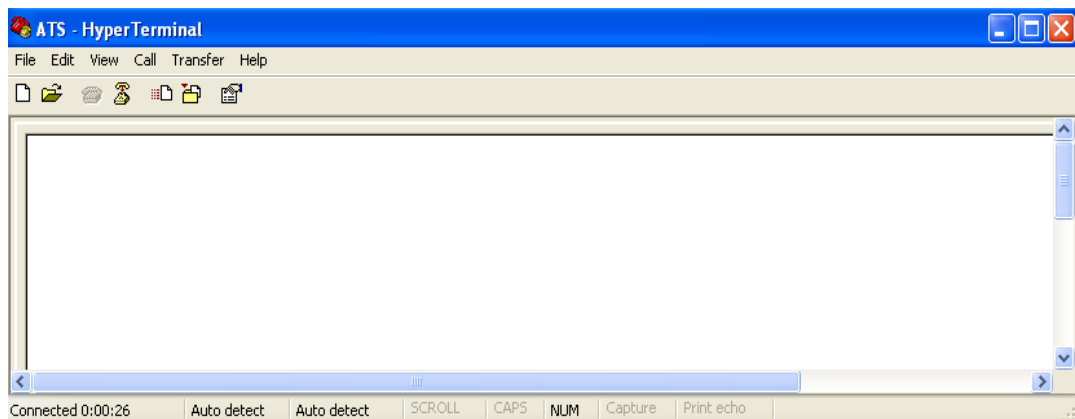
7.10   Press Enter, following message will be displayed in the interface if setting success.
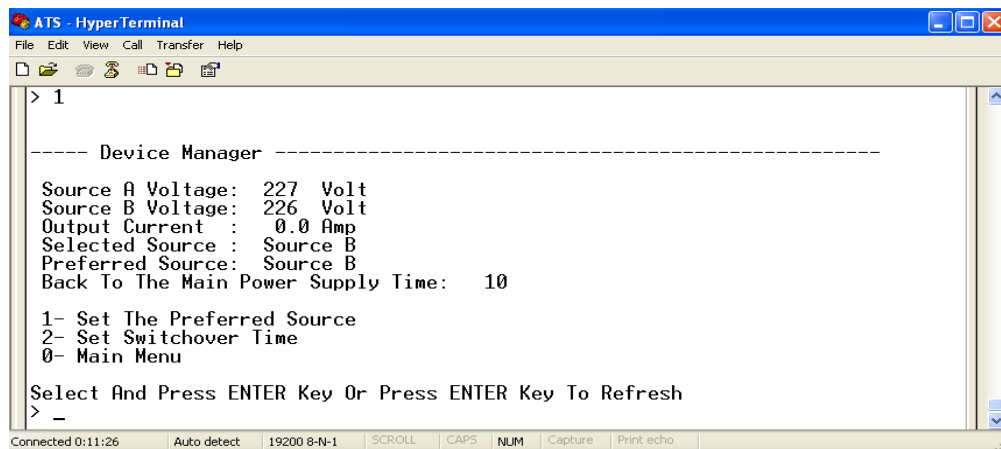

Main Menu

1-Device Manager

2-Set Current And Voltage Limit

3-System Time

7.11 View the ATS status.

Enter 1 and press Enter, the ATS status will be displayed in the interface as below:

Device Manager: Device Manager

Source A Voltage: The voltage of the source A

Source B Voltage: The voltage of the source B

Output Current: The output current

Selected Source: The current input power is source B

Preferred Source: The preferred input power is source A

Back To The Main Power Supply Time: Re-transfer time is 10 seconds

1- Set The Preferred Source: Enter 1 then press Enter to set the primary power source

2- Set Switchover Time: Enter 2 then press Enter to set the Re-transfer time

0- Main Menu: Enter 0 then press Enter to return to main menu

7.12 Set the preferred power input, follow up the path step by step:

Main Menu =>1 Device Manager => 1

Set the Preferred Source, it will show the following window

7.12.1   Enter the corresponding code, for example:

Enter 1 then press Enter to select input A as the preferred power input.   The interface will return to the

Device Manager interface.   See the window below for reference.

**Preferred Source:**   Source A means that input A was select as the primary power source.

7.13   Set the Re-transfer time:

Main Menu => 1 (Device Manager) => 2 (Set Switchover Time)

Enter the preferred value, then press Enter.   The Re-transfer time ranges from 10 to 60 seconds. The ATS will

transfer to the preferred input power after defined time when the user gives the order to transfer or the

preferred input line recovers from a power failure.
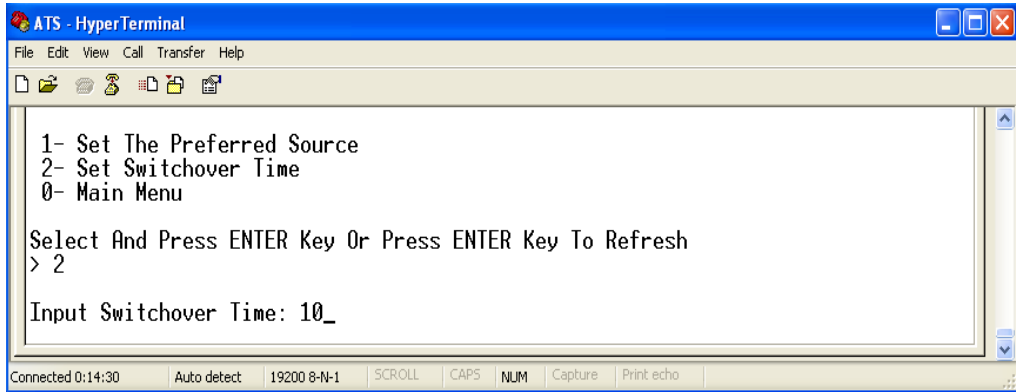
7.14 Define the threshold voltage and current.

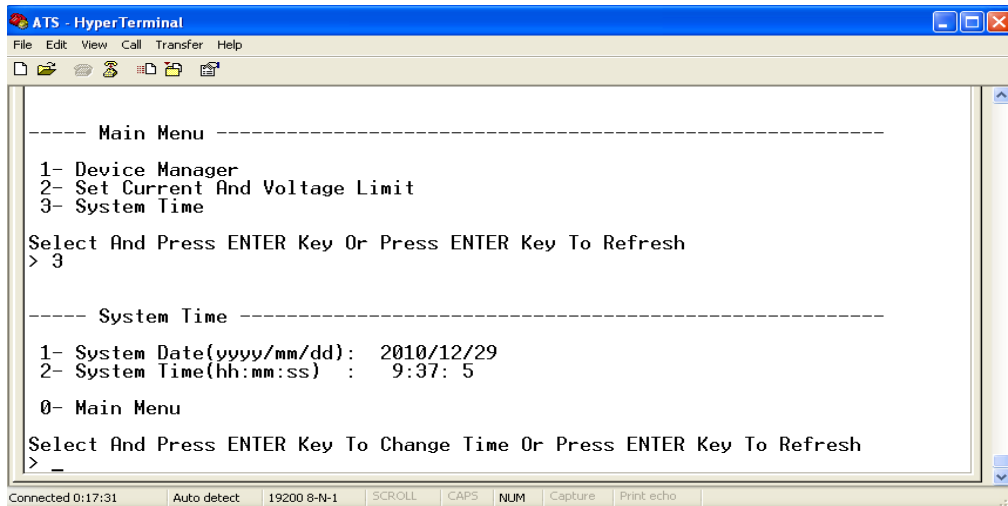**Main Menu =>2 (Set Current And Voltage Limit)**
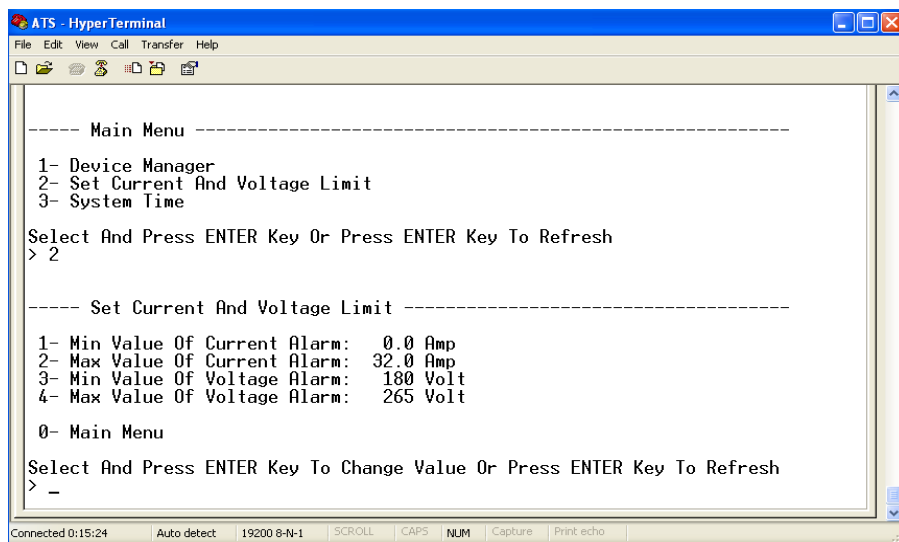
Enter corresponding number to re-define the item that user want to change.

- Select 1 to set the minimum value of current to alarm

- Select 2 to set the maximum value of current to alarm

- Select 3 to set the minimum value of voltage to alarm

- Select 4 to set the maximum value of voltage to alarm.

For example, if the user wants to change the value of the minimum current alarm, enter 1 then press Enter:
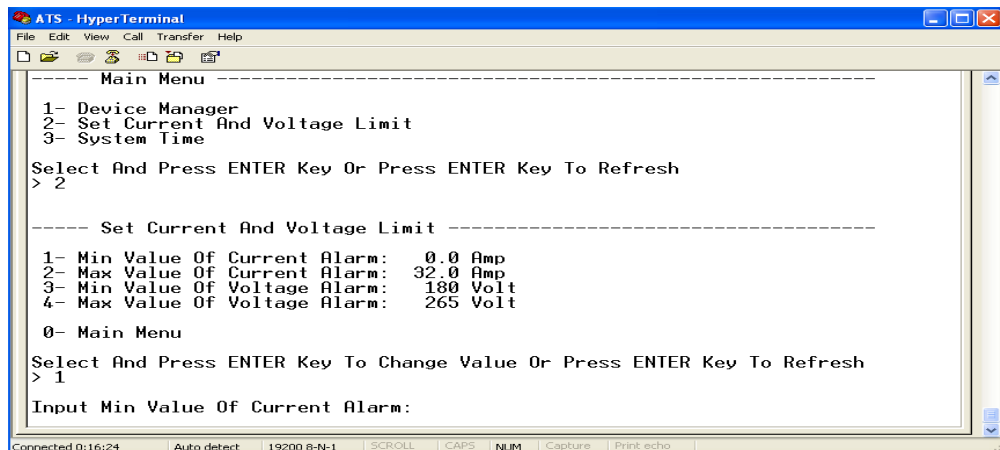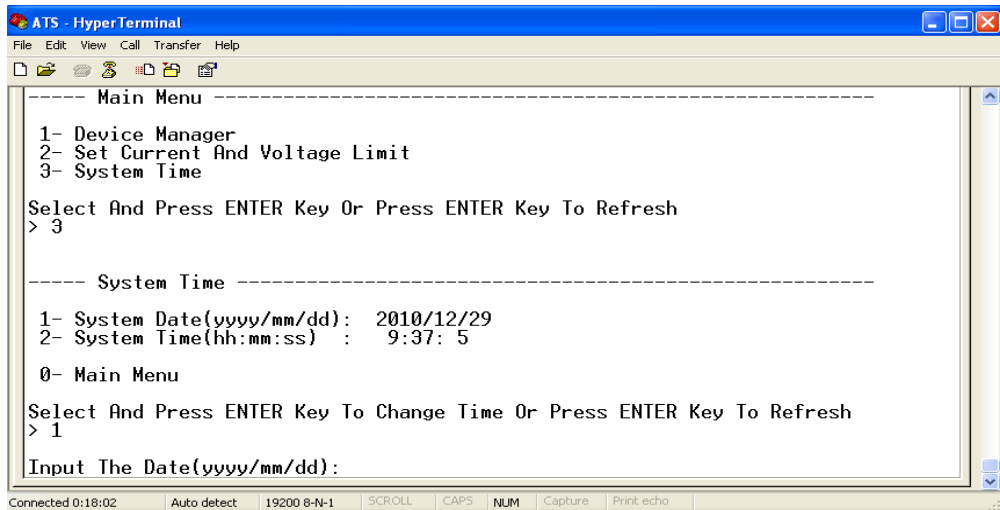

Enter the preferred value, then press Enter.   Return to Set Current And Voltage Limit interface.

7.15   Setup the system time of ATS.   **Main Menu =>3 (System Time)**
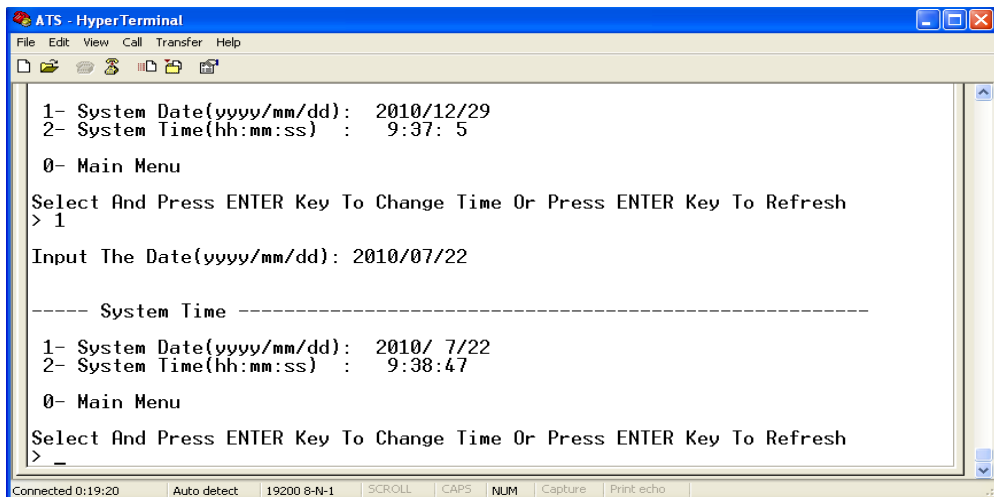
7.15.1   Select 1 to modify date.   **Main Menu =>3 (System Time) =》 1**

Enter the correct date format in the window. For example: 2010/07/22
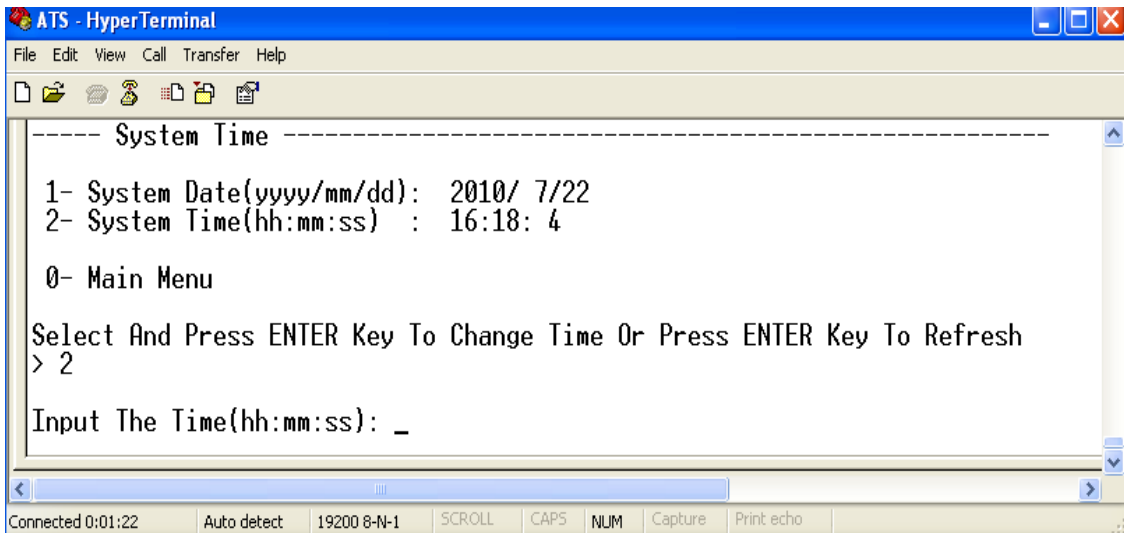
The above window shows that the setting is a success.

7.15.2　Input the Time　**Main Menu=>3 (System Time) =>2**

Enter the correct time form in the window.　For example:　11:15:23

The above window shows that the setting is a success.

8. Performance Parameters

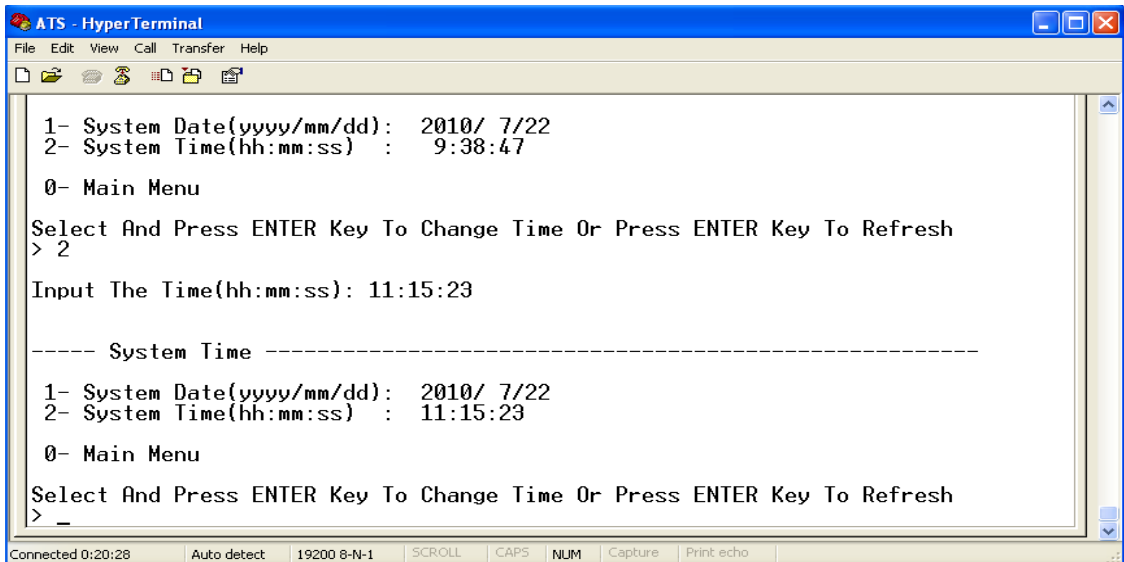| Function	ITEM			Performance Parameters		
Input	Power Input			2 power input		
	Rating Voltage			220VAC		
	Voltage Range			180VAC~260VAC		
	Rating Power			50/60HZ		
	Frequency Range			Rating power ±5HZ		
	Overload & Breaker			Optional, one of them can be added (not both)		
	Surge Protector					
	Max Load Current			16A, 32A		
	1U		Power input method		Plug	Load current
		1	IEC 320 C20 x 2			16A
		2	Cable		IEC60309×2	16A
	2U	1	Cable		IEC60309×2	32A
Output	1U		Power output	Connector	Output	Outlet Quantity
		1	Socket		IEC320 C13	6
					IEC320 C19	2
		2	Cable	IEC60309 16A		1
	2U	1	Socket		IEC320 C13	12
					IEC320 C19	4
		2	Cable	IEC60309/32A		1
	Max Load Current			16A, 32A		
Communication/alarm port	Logic Port			Headphone (1) to connect the external speaker		
	Network Port			RJ45 (1, Intelligent Models)		
	Serial Communication Port			RJ45 (1)		
	Phone Alarming Port			RJ11，1 (Intelligent ATS)		
Transfer	Transfer Polarity			L、N (Double Polarity)		
	Transfer Time			10 ≤ 16ms		
Display	Output Current			Digital Display	LED, three-digit, red	
				Display Resolution	100mA ±1%+1D	
	Output voltage			Digital Display	LED, three-digit, red	
				Display Resolution	1V ±1% +3D	
	IP Address			Left Circulation Display, (intelligent ATS)		
Mounting	Horizontal Rack Mount			1U or 2U		
Case color	Color			Black		
Accessories	Brackets			One Set		
	Network Cable			2M, Blue (1 piece)		
	User manual			One set (Include a CD)		
Working Temp	-5~40℃					
Storage Temp	-20~70℃					
Op. Humidity	30%~90%, Non-Condensing					

9.   Accessories List

- 1 x Serial Cable

- 1 x Network Cable (only intelligent ATS)

- 4 x φ6×16mm cross bolt

- 1 x User Manual and CD

Optional Accessories:

- Circuit Breaker

- Surge Protection Module

10.   Warranty Policy

The product is guaranteed for **2 years (24 months)** from the date of purchase.   We will repair or replace the detective products covered by the warranty.   If product has already exceeded the warranty period or the problem are caused because of illegal operation, a corresponding fee will be charged.   The following cases are not covered by the warranty:

4. Problems caused because of improper maintenance

5. Problems caused because of unauthorized changes, modifications or improper use

6. The device is not used or stored in the appropriate physical environment

Repair notice:

1. Make sure to use protective hard carton packaging when arranging the shipment to repair.   Problem occurring during the shipment is not covered by the warranty.

2. Include a description of the problem and the operation process.

3. Customer to pay for the shipping cost as well as the customs duties.

4. Please list your name, address and phone number so that we can contact you at any time.