

SVT SUITE SOFTWARE USER MANUAL

SVT

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1.Installations & Settings

1.1. Note

- Operating OS: Windows 98/Me/2000/2003/XP.
- Communication Port: A serial port, USB port or RJ45 port is required.
- For NT system, its installation is required to apply with administrator account ID.

1.2. Installation

1.2.1 Switch On the SVT Solar Inverter; connect the communication port of the inverter with the computer via a serial port, USB port or RJ45 port. While installing SVT Suite Software, please login the file server as a SUPERVISOR.

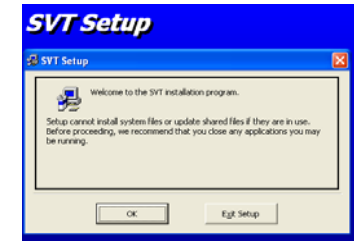
1.2.2 Insert the software CD into the computer disc and AutoRun.exe will be executed automatically. If it doesn't run automatically, then run the "Setup.exe" manually.



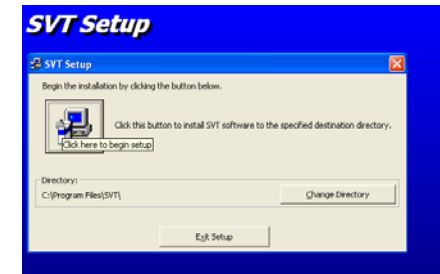
[Install]: to install SVT Suite Software

[Exit]: to escape from the software.

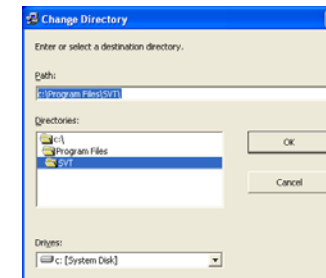
1.2.3 Click [OK] to proceed to the next step.



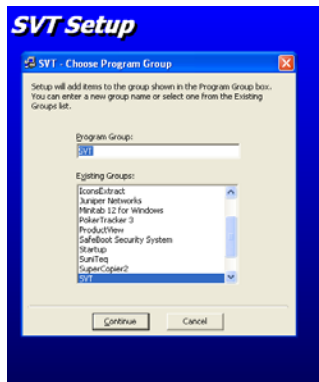
1.2.4 Click on [] to start installation.



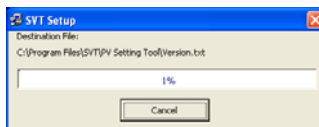
1.2.5 The [Change Directory] setup page allows user to select a desired location where the SVT Suite Software is saved. The "Setup" program will automatically select "C:\Program Files\SVT" as the default path to save the software. Click [OK] to proceed to the next step.



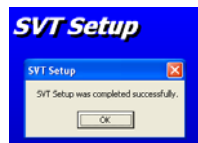
1.2.6 The “Choose Program Group” setup page allows user to change the name of SVT to his desired one. The “Setup” program will automatically select “SVT” as the default Program Group. Click on **[Continue]** to continue installation.



1.2.7 It shows the installation is under process.



1.2.8 Upon “Setup” installation is completed, the following page will be displayed. Click **[OK]** to run the SVT Suite Software.

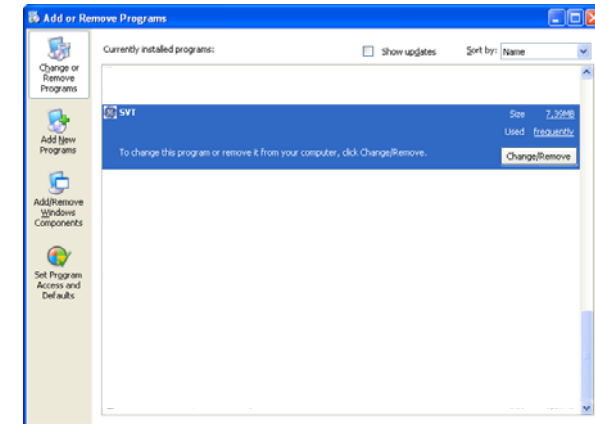


1.3. Un-install SVT Suite Software

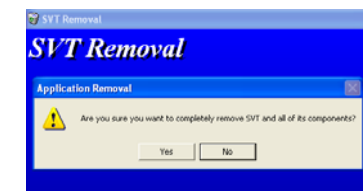
1.3.1 Click directly on the **[Uninstall]** shortcut on the SVT Menu of windows



Or go to Windows Control Panel and select “Add or Remove Programs”. In the “Add or Remove Programs” page, select “SVT” and click **[Change/Remove]**.



1.3.2 The screen is shown as below, click **[Yes]** to confirm the removal of the SVT Suite Software or click **[No]** to cancel the removal.

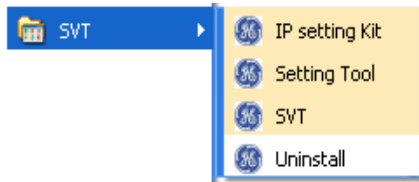


1.3.3 Click **[OK]** to complete the removal.



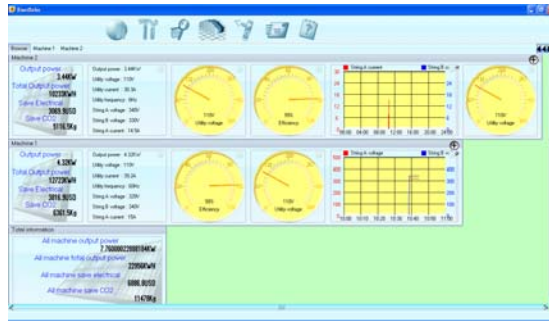
2. Presentation of the different software

Click on [Start] menu, then look for the SVT menu as shown bellow:



2.1 SVT

This software is the monitor of your installation. You can visualize all the data coming from all the different inverters.

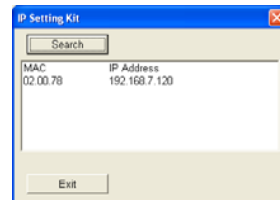


2.2 Setting tool

The setting tool is available only for the Installer. It will allow him to configure your inverters according to the country you are. If you are an installer reading this manual, please refer to the Setting tool User manual.

2.3 IP setting Kit

This software is to configure the IP address of all the Ethernet card provided with the inverter. For more information, please refer to the "Communication interface" section, of this manual.



2.4 Uninstall

By clicking on this shortcut, you will start the procedure of des-installation. Please refer to the uninstall section of this manual.

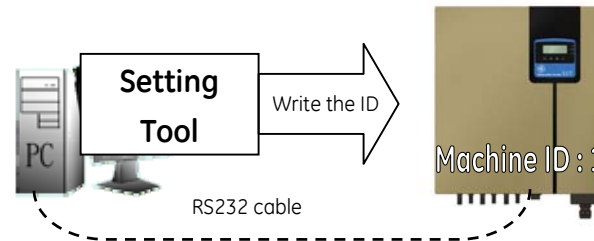
3. Communication interface

3.1 General overview of the installation steps

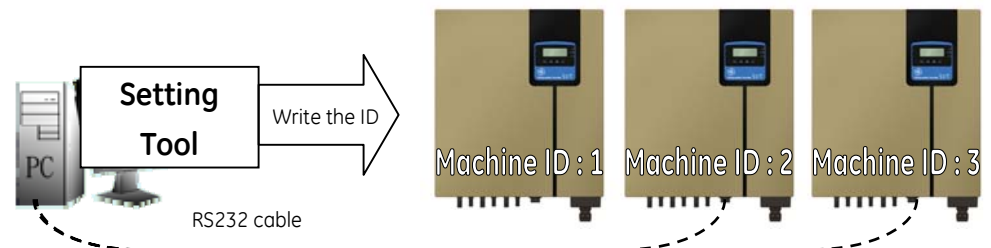
Here is a general overview of the steps that need to be followed:

Step 1 Connect the inverter to the computer with the RS232 port.

Step 2 Launch the Setting Tool and write an ID for this inverter
See paragraph 2.4.2 of the Setting Tool User Manual



Step 3 Repeat the Step 1 and Step 2 writing a different ID for each inverter



Step 4 Once you have identified all the inverters, connect all of them to your computer with the appropriated connection (RS232, Ethernet, USB and/or RS485)

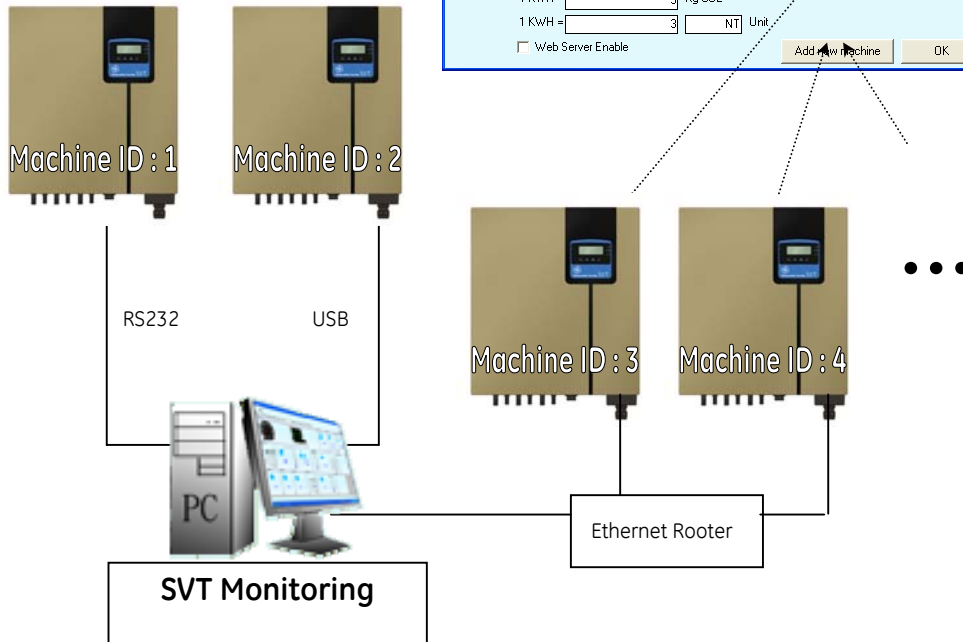


Step 5 Launch **SVT Monitoring Software** and click on [Config]

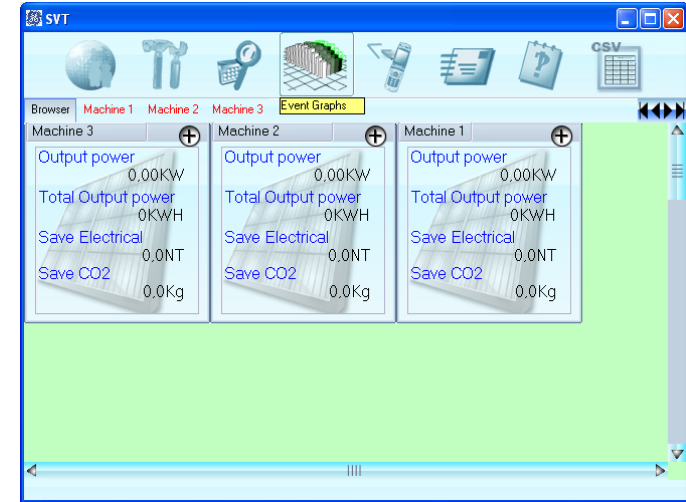
Step 6 Add as many inverters as are connected to the computer clicking on [Add new machine]

Step 7 Associate each machine ID with the communication port they are connected with.

The 'Config' window displays settings for three machines. Machine 1 is configured with RS232, Machine 2 with USB, and Machine 3 with RJ45. Each machine entry includes fields for Name, Machine ID, Model (FVIN02KS), Connect type, Connect config, Temperature number, and Illumination number. At the bottom, there are fields for '1 KWH =' and 'Kg CO2', a 'Web Server Enable' checkbox, and 'Add new machine' and 'OK' buttons.



Step 8 Click on [OK] and you can see the different machine that have been added (3 in this example)

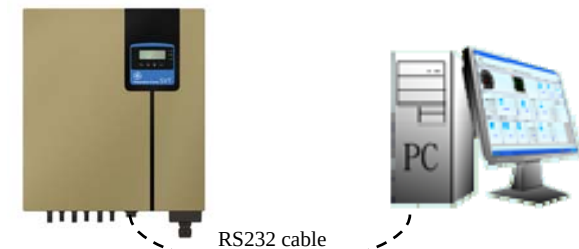


3.2 Standard communication interface

Before starting the SVT Monitoring Software, choose the way you want to connect the inverter to the computer. Please carefully read the installation and configuration setting describe on that section.

3.2.1 RS232

Connection configuration

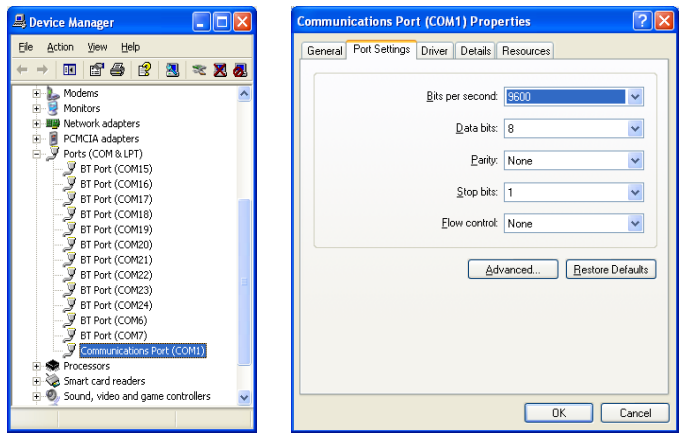


In order to configure the RS232 port interface, follow the instructions:

Windows Port COM properties

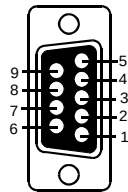
Step 1 Go to the “**device manager**” of windows (to do so, click on [Start] menu, then on [Run...], then enter “devmgmt.msc” then click [OK])

Step 2 Select the [Ports (COM & LPT)] object, select the [communication port] affected, then check the setting of the port.



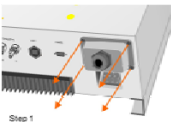
Baud Rate	9600 bps
Data Length	8 bits
Stop Bit	1 bit
Parity	None
Flow control	None

The pin assignments of standard RS232 type is illustrated as follows

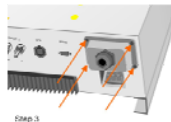


- Pin 2: RS232 Rx
- Pin 3: RS232 Tx
- Pin 5: Ground

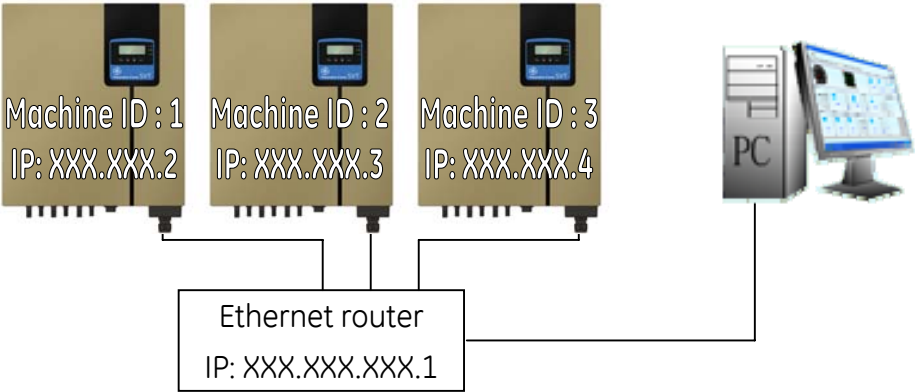
3.2.2 TCP/IP



All inverters are provided with the Ethernet board already installed. You just have to remove the plastic covert, plug the Ethernet cable and relocated the plastic cover



Connection configuration



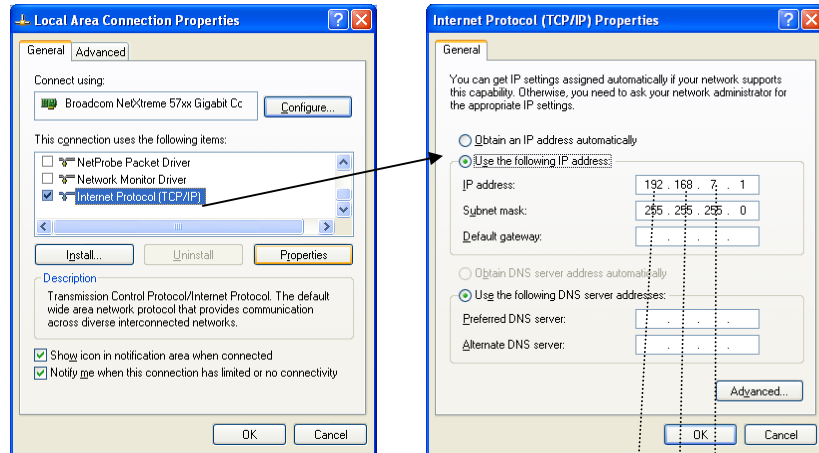
In order to configure the Ethernet network with the inverters, please execute the following steps:

Setting tool

Step 1 Make sure your installer has set a different ID for each inverter. If you are an installer and you read this manual, please refer to the Setting tool user manual, and set a different ID for each inverter, then provide the list to your end user customer in order to built the network.

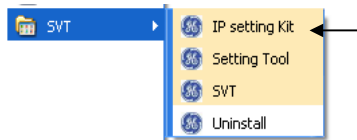
Windows IP properties

Step 2 Open the [local area connection properties], and configure the IP address of your computer as following.



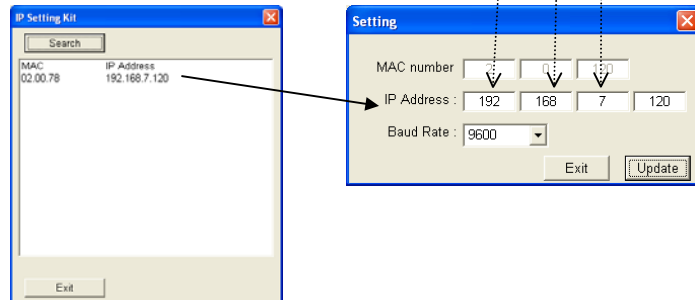
IP Setting Kit

Step 5 Run the IP Setting Kit software



Step 6 Click on [search] in order to create the list of all the inverter connected to the network.

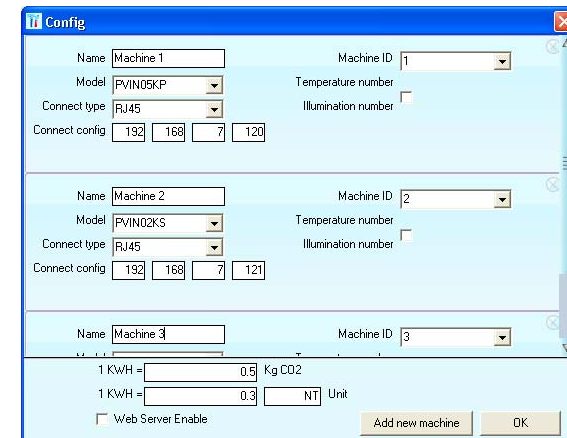
Step 7 Each inverter is represented by his MAC address, click on each one in order to modify the IP address. Finally click on [Update]



SVT Monitoring Software

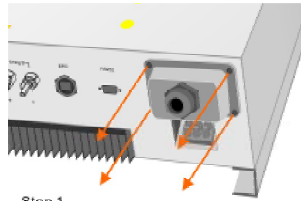


Step 8 On the SVT monitoring, click on [Config], and configure your PV system with the same Machine IDs (given by your installer) and the same IP address you set with the IP setting Kit. For more details, see the Section System and configuration.

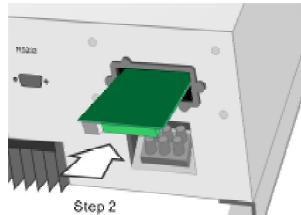


3.3 Optional communication interface

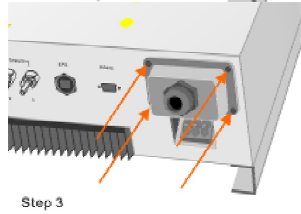
3.3.1 Physical installation



Open the top and sides of the cabinet



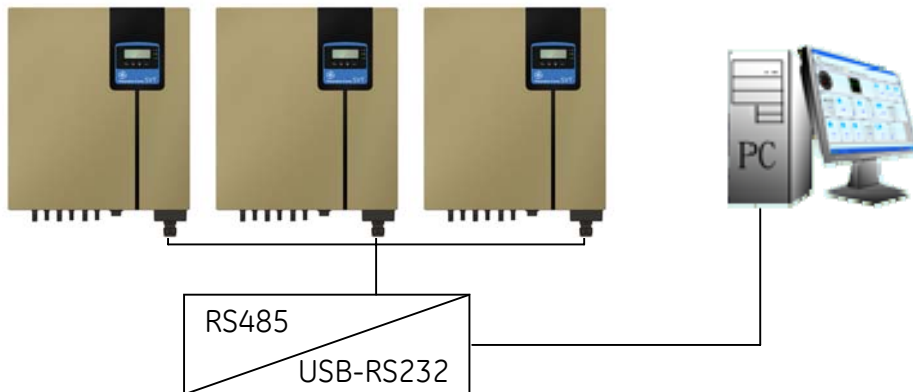
Put the communication card into the slot,
Connect the appropriated cable.



Screw back the side & top cover and complete
the installation

3.3.2 RS485

Connection configuration

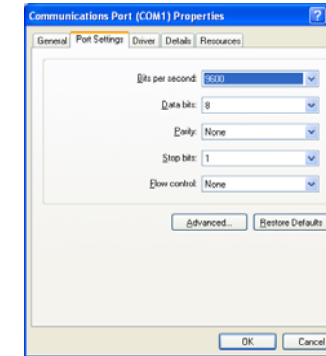
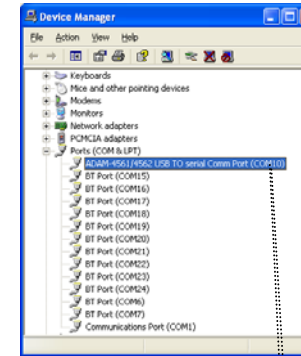


In order to configure the RS485 port interface, follow the instructions:

Windows Port COM properties

Step 1 Go to the “device manager” of windows(to do so, click on [Start] menu, then on [Run...], then enter “devmgmt.msc” then click [OK])

Step 2 Click on [Ports (COM& LPT)] object, select the [communication port] affected, then check the setting of the port.



Baud Rate 9600 bps

Data Length 8 bits

Stop Bit 1 bit

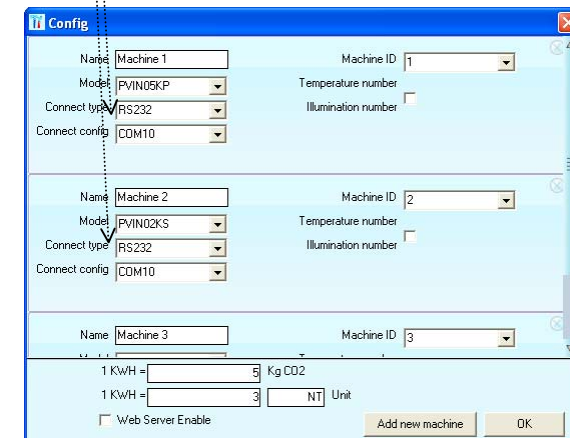
Parity None

Flow control None

SVT Monitoring Software

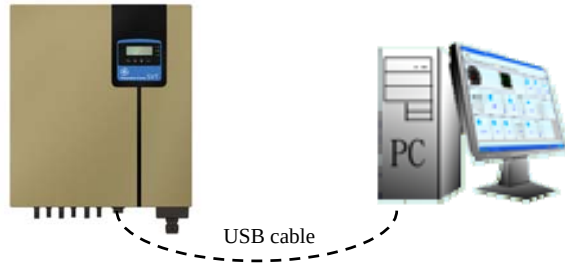


Step 2 On the SVT monitoring, click on [Config], and configure your PV system with the same Machine ID you set with the setting tool.



3.3.3 USB

Connection configuration



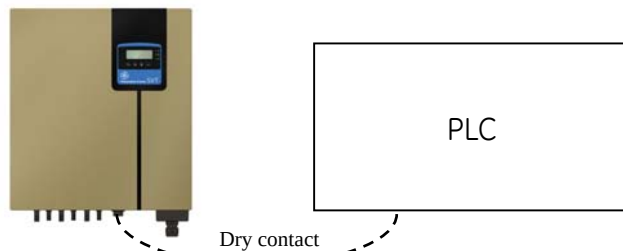
Step 1 Connect the inverter to the computer with the UBS cable

Step 2 The USB protocol is plug & play, so you do not need to make any driver configuration.

Note that you can only have one USB connection by computer.

3.3.4 DCE-B Card

Connection configuration



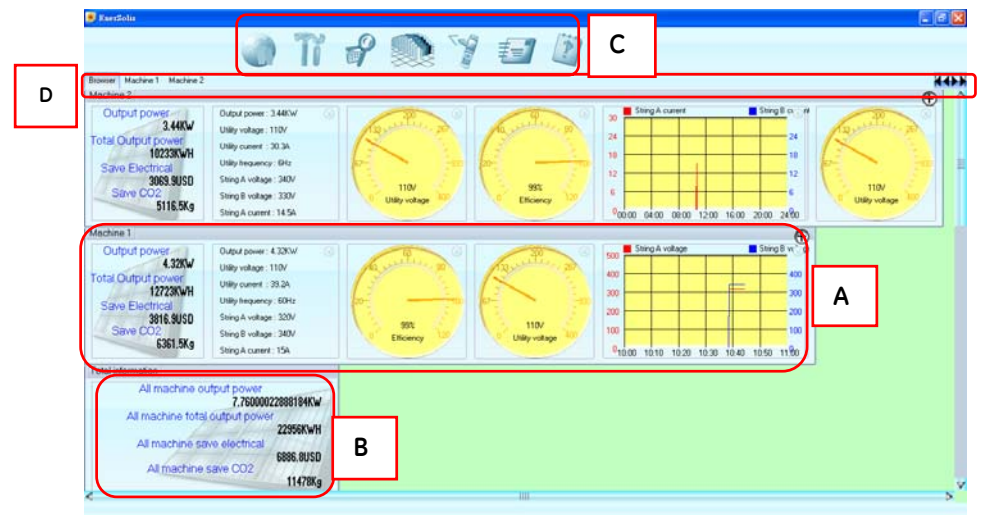
Please refer to the User Manual in order to have a definition of the pin assignment. You cannot use the SVT Monitoring Software with this communication board.

4. SVT Monitoring – Main panels description

SVT Monitoring Software is a simple, user-friendly monitoring system for solar system, which can be easily connected via RS232, USB or RJ45 communication port. Selective panel enables user to select the monitored elements or re-locate the selected monitored elements in the desired area.

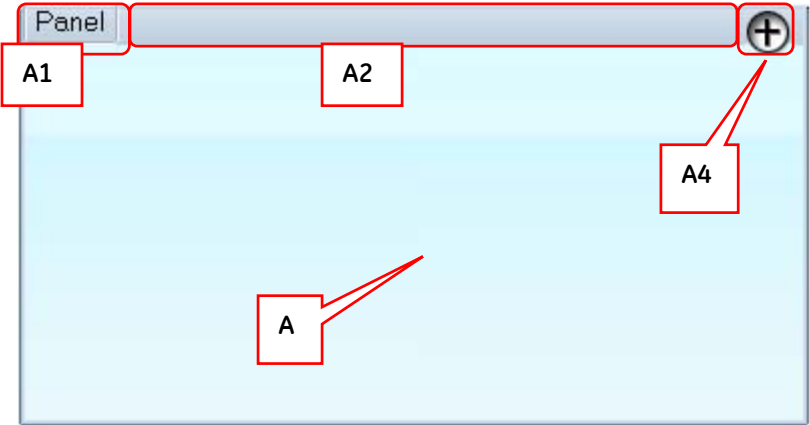
The **"Event Log"** function provides a list of records of all the events & tasks to be performed by the software. The **"Event Graph"** helps to understand and analyze daily, monthly and yearly curve of the total power generated. You may also change over the 3D bar chart into 2D in order to get more in details, such as the output power, output current, DC input voltage, DC input current, input power, illumination, temperature. In case the inverter is out of order, the SVT Monitoring Software is capable of notifying specified user warning message with graphic via SMS & email instantly. The following chapters will provide detailed descriptions of these superior features provided by SVT Monitoring Software.

4.1. Browser - Real Time Information Monitoring



Real time monitoring shows real time status of the SVT Solar Inverter. The monitoring status is displayed in 『panel』 format (see the panel below) . The panel is allowed to be put different “elements” as listed below, which indicate all the information from the inverter itself. One panel might refer to multiple inverters; on the contrary, multi panels might refer to one inverter as well.

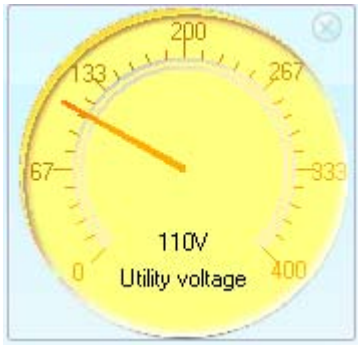
A. panel



- [A1] **Inverter Name:** the inverter that is under monitoring. All information shown above is for this specified inverter.
- [A2] **Window Dragger:** move the panel by click the left button of the mouse & drag.
- [A3] **Monitor:** Place all the elements that need to be monitored in the indicated area.
- [A4] **Add-in Button:** click 『add in new window』 to increase monitored elements of the panel. You may add new panel by referring to 4.1.2 for more detail.

4.1.1 Detailed Description

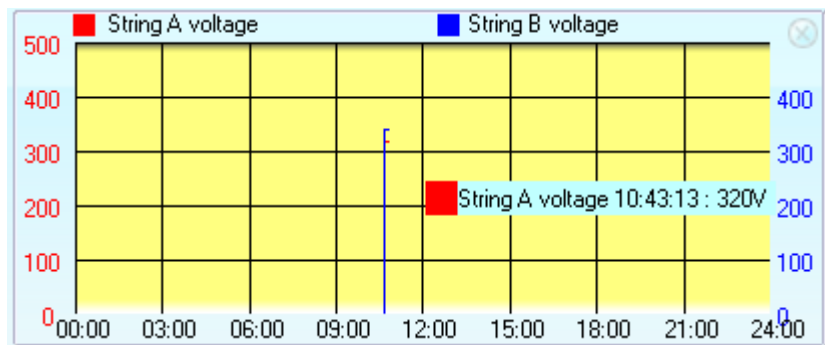
Monitored Element	Description
	Output Power Monitoring: To display the information of PV Inverter, such as output power, total output power, the electricity saved and the CO2 saved. These are minimum monitored elements for one inverter that generated by the software automatically, which can not be closed. To drag the element, please use left-click of the mouse. Save Electricity: Please refer to Chapter 2.3 for saving rate. Save CO2: it is a rough calculation that CO2 might be reduced.
	Monitoring Information in Text: To indicate the information of the PV Inverter in text style, such as Output Power, Utility Voltage, Output Current, Utility Frequency, DC Input Voltage, DC Input Current, Input Power, Total Output Power, illumination, ambient temperature, surface temperature, battery voltage, battery charging current and battery discharging current. Maximum seven(7) information may be selected and shown on the screen. Click to close the monitored element and move the element by left-clicking the mouse and drag to the desired area.



Monitoring Information in Meter:

To display the information of the inverter, such as voltage, current and efficiency.(It may vary from model to model.)

Click  to close the monitored element and move the element by left-clicking the mouse and drag to the desired area.



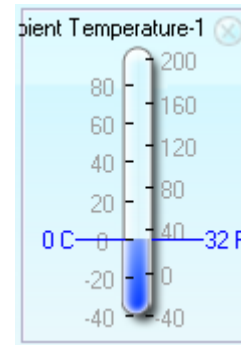
String Monitored Element:

To display the information of the inverter with strings, such as output power, output current, DC input voltage, DC input current, input power, battery voltage, and battery charging current.

click  to close the element and move the element by left-clicking the mouse and drag to the desired area.

Putting mouse cursor to the right-hand side of the desired element, it turns to be , and then left-click + drag to change the width of the monitored element.

Putting mouse cursor on the string (i.e. current time) desired, the detailed information of the string is displayed immediately.



Temperature Gauge:

To monitor the ambient temperature and temperature of the solar module.

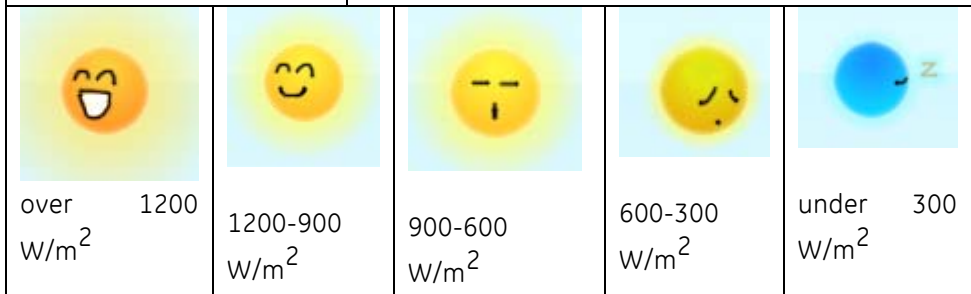
click  to shut down the monitored element and move the element by left-clicking the mouse and drag to the desired area.



Illumination Element:

To display the illumination with icon for monitoring solar cell sensor (being vary with the type of machine) ,Detailed descriptions of the icons are as bellows:

click  to shut down the monitor.
left-click the monitor to drag it.

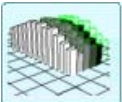


B. Total Output Power:

To display the information of the total output power, total electricity generated, total electricity saved and all the CO2 reduced of the inverters connected.

C. Tools Field:

The function of each tool will be displayed by moving the mouse cursor over it. Double click on each icon to perform its respective function. The descriptions of the icons are as bellow:

icon	Function	Description
	Language Selection	The default language of SVT Monitoring Software will be depended on the system operating setting of the computer. This icon allows user to change the default language to other preferred one.
	System Configuration	It allows to configure parameters and connecting setting.
	Event log	It provides a list of events in calendar format.
	Bar chart	The Bar chart summarizes all the data monitored.
	SMS Setting	To set the account(s), password, server or mobile phone number that SMS shall be sent while event occurs.
	E-mail Setting	To set the email accounts needed to be sent while event occurs.
	About	To record the version and copyright of the SVT Monitoring Software..
	CSV	To export data (into <i>Comma separated values</i>) and make analysis in other software.

D. Information & Control Menu:

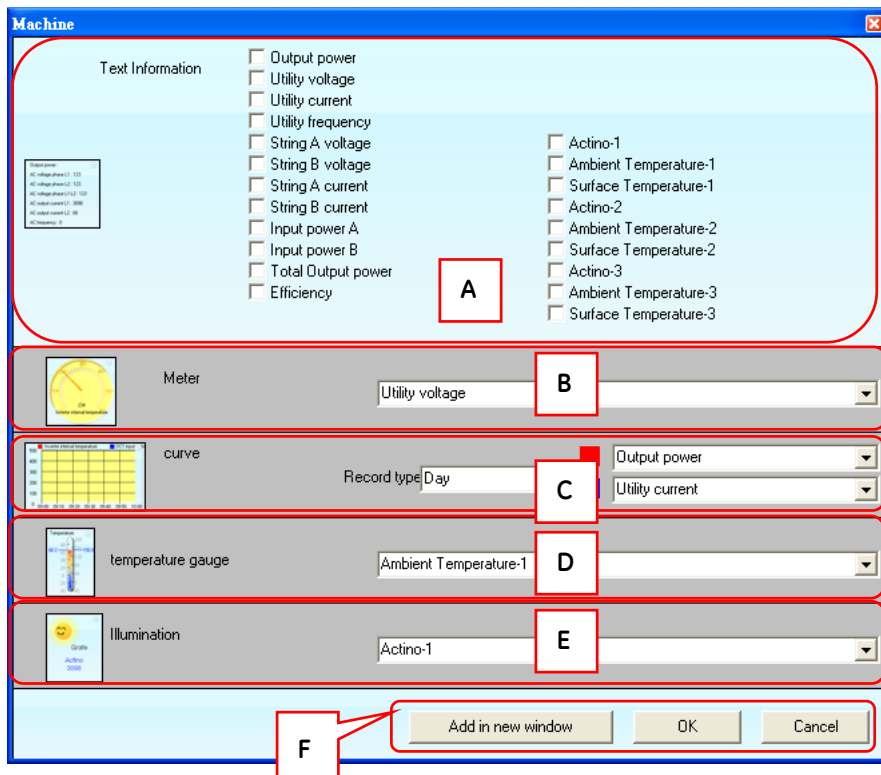
Information & Control Menu consists of 2 types of control selections-- browser and monitoring. Clicked the name of the inverter, the name turns as Machine 1, and the monitoring window will be changed over to 『single machine monitoring』. Please refer to 2.1.2 for detailed description of single machine monitoring.

The machine name shown in black letter as Machine means the inverter works normally. When the “Machine” turns to red letter as shown as Machine 1, it means the inverter is abnormal. To select this icon, please click and it turns with red color in background as Machine 1.

If the numbers of the inverters monitored and the name of them are longer to be fitted in the menu area, you may use  to check the names shown in Info. & Control Menu.  is to move to the first name on the left side;  is to move to the next left;  is to move to the next right;  is to move to the last name on the right side. Or left-click & drag the machine name(s) to re-arrange the Info. & Control Menu directly.

4.1.2 Additional windows panel

Click on  in order to open the following panel:



A. Text information selection:

It means the element is selected when the background of “Text Information” turns to blue. The SVT monitoring system itself can detect all the information of the inverter automatically, then show them in 『text information selection』. After maximum seven(7) items are selected, double left-click 『text information selection』 or click 『OK』button of『F control button』,the selected information and elements will be added in the window.

B. Meter selection:

It means the element is selected when the background of 『meter selection』 turns to blue. The SVT monitoring system itself can detect the voltage, current, and efficiency of the inverter, then show them in 『meter selection』.After choosing the items desired, double left-click 『meter selection』 or click 『OK』 button of 『F control button』,the selected information and elements will be added in the window.

C. String selection:

It means the element is selected when the background of 『Curve selection』 turns to blue. The SVT Monitoring Software itself can detect the output power, output current, DC input voltage, DC input current, input power, battery voltage, and battery charging current of the inverter and show in 『String selection』. thereby, select 『String selection』to be 『day』or 『hour』 to monitor the inverter by day or hour.

The graphics provide with two kinds of strings. For , the monitoring status is shown in red string, and  shown in blue. To finish the setting, double left-click 『string monitor selection』 or click 『OK』 button of 『F control button』,then the selected information and element will be added in the window.

D. Temperature Gauge Selection:

The background of the selection turning to blue color means that element is selected. The software gets the temperature information of different inverters, then adds them in 『temperature gauge selection』(If the inverter doesn't provide temperature information, the selection won't be shown on the screen. Double click 『temperature gauge selection』 or click 『OK』 button of 『F control button』, then the selected information and element will be added in the window.

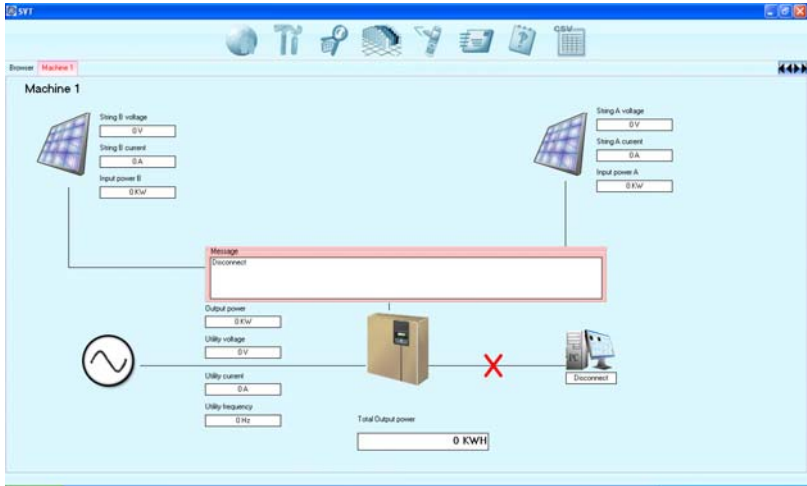
E. Illumination Selection:

The background of the selection turning to blue color means that element is selected. Software itself learns the illumination information of different type of inverters automatically, then add them in 『illumination selection』 (If the inverter doesn't provide illumination information itself, the selection won't be shown on the screen.) Double left-click『illumination selection』 or click 『OK』 button of 『F control button』 ,the selected information and element will be added in the window.

F. Control Button:

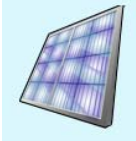
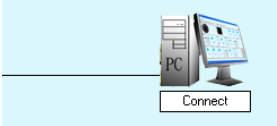
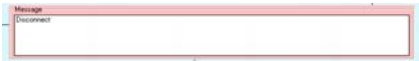
The background of the selection turning to blue color means that element is selected. The selected information and element will be added in the window after clicking 『OK』 button of 『F control button』 . Click 『add in new window』 for a new monitoring window being added and leave it with the old window to monitor the same inverter at the same time. Click 『cancel』to close the window without adding any new element.

4.2. Single Machine - Real Time Information Monitoring



Single machine monitoring displays the type of the inverter with simple diagram together with all the information marked in the diagram. The Single Inverter Monitoring function might be and changed varied according to the type of the inverter.

Icons of single machine monitoring:

Icon	Description
	This icon represents solar cell for displaying relevant information.
	This icon symbolizes utility power, which shows the output power delivered to Utility Power and also the relevant information from the Utility Power.
	This icon represents the connection between the monitored inverter and the computer is normal.
	This icon represents the connection between the monitored and the computer is poor or interrupted.
	This part of the panel appears when there is an Error or an Alarm, disappear when the Error on Alarm is solved.

5. SVT Monitoring – Functions description

5.1. Language Selections

The SVT monitoring system provides various major languages for user's selection. On initial start-up, the software will automatically select the language similar to the default language of the operation system of the computer connected. If the default language is not supported by SVT, English will

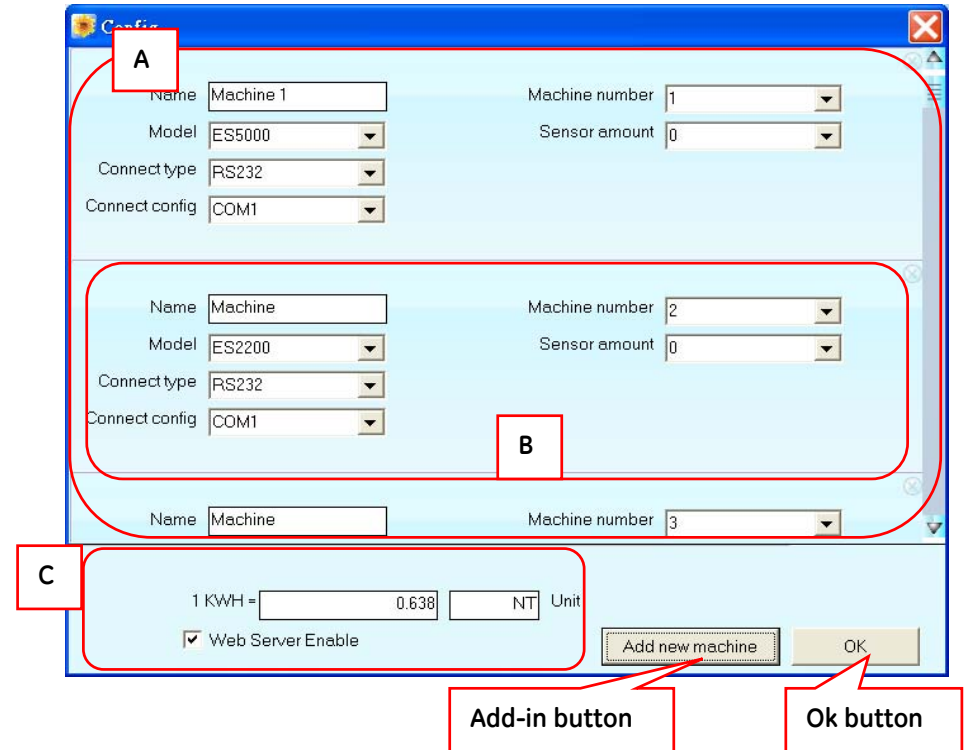
automatically be set as default. This Language Selection button [] allows user to change the default language to other available languages.



5.2. System Configurations



The screen below shows the "System Configurations" panel. This page allows user to select & set the type of the connecting Com port, the inverter names and the preferred models. To confirm the new setting, you need to re-start the system.



A. Inverter configuration :

To fit with all of the 『single machine config.』, click 『Add-in button』 to add a 『single machine config.』 in machine config.

B. single machine config.:

Set the name, model, and communication way of the inverter. Setting items are listed as below:

Item	Description		Remarks
name	Set the name of the inverter in the Info. & Control Menu and also the name of monitoring window for real time display.		
model	Select the model of the inverter.		
connect type	Select the type of communication port among COM, USB, or RJ45 port		
Connection configuration	COM	Select RS232 communication port.	
	USB	Required no configuration	
	RJ45	Set the IP address of the inverter.	
machine number	Set the number of the inverter selected while installation.		
sensor number	Set the numbers of the sensors needed to be installed. When the sensor numbers are set, you have to set how the communication shall be connected, via COM, USB or RJ45.		for special type of inverters
connection type	Select the type of connection among COM, USB, or RJ45 port (being varied with different port).		for special type of inverters
Connection setting	COM	Select RS232 communication port.	for special type of inverters
	USB	Required no configuration	
	RJ45	Set the IP address of the inverter.	
	To remove the monitoring of the inverter		

C. Other Setting:

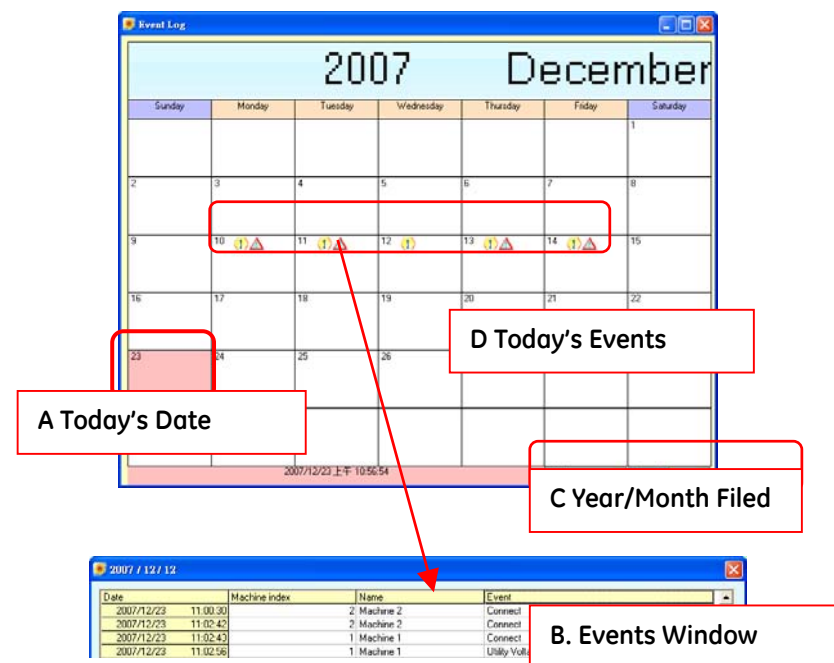
You may set the rate that you may save from each KWH by adding currency.

Also, you may enable/disable Web Server monitoring.

5.3. Event List



The “Event Log” function provides a list of records of all the events & tasks to be performed by the software and those that had occurred on each day of that particular month. It provides a summary of the Utilities conditions and SVT testing results. Click the “Event List” button to display a calendar page as shown below:



A. Today: To indicate “today” in Pink background.

B. Events Window: Click any desired day on the calendar page to activate a pop-up window displaying a list of recorded events.

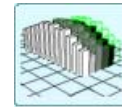
C. Year/Month Field: Select the desired Year & Month to be displayed.

D. Today's Event: Graphic symbols display the events occurred in that day. The descriptions of the event(s) will be displayed when moving the mouse cursor over the symbols. Please refer to the below table for the detailed descriptions.

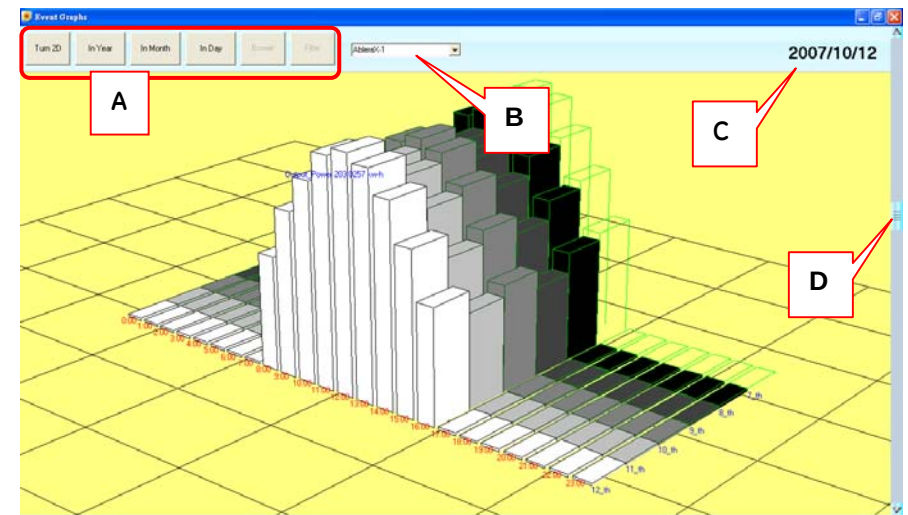
Symbols	Descriptions
	Over-frequency / Under-frequency in Utility mode
	Over-voltage / Under-voltage at input in String A
	Over-voltage / Under-voltage at input in String B
	Islanding Alert
	Unbalance Voltage at input
	Current Leakage at ground
	Resistance Impedance at ground
	Resistance Impedance at system
	Phase Shift in Utility
	Waveform abnormal in Utility
	On Standby
	Cut Off

Symbols	Descriptions
	DC Capacitor charging abnormal
	Inverter Out of Order
	Boost abnormal
	Inverter Fault
	Battery Faulty
	EPO Mode
	DC Capacitor Over-voltage / Under-voltage
	Inverter Over-current
	Inverter Over-heat
	Inverter Output Power
	Charger Faulty
	Output Short Circuit
	PLL(Phase Lock Loop) Abnormal
	EEPROM Data Abnormal
	Heat sink Over Temperature
	DC Capacitor Discharge Abnormal
	Inverter Relay Faulty
	Over-current at input in String A / String B
	Charger Over-voltage
	Inverter Output Balance Abnormal
	EEPROM Data Not match with Inverter

5.4. Graphics



Graphics illustrates the output power of the inverter in 3D bar chart, also the 3D bar chart displays the variation of the output power within a preset time. The 2D chart illustrates the information of the inverter, such as the output power, output current, DC input voltage, DC input current, input power, illumination, temperature, battery voltage, and battery charging current.



5.4.1 3D Mode

3D bar chart displays the total output power of the inverter within a preset time in 3-dimensional way.

Operation Instruction:

- left-click and drag the window in left or right direction to rotate the view angle of the camera in Y direction.
- left-click and drag the window in up or down direction to move the camera in z direction. Current time is in white color, and it turns darker as the time bar is scrolling backward to the left.

- Put the mouse cursor on the object you want to view, the output power of the bar is displayed immediately.
- left-click on the object you want to view, the 3D bar chart displays intersection view for studying the output power changing within a preset time, and release left finger to go back to the original view.
- Double left-click on the object you want to view in year mode, it turns the year mode into month mode, then double left-click again to turn the month mode into day mode.
- Right-click and drag the window to zoom in or zoom out the browser.

A. Control Button:

Button	description	remark
Go to 2D mode	Click 2D mode to get detailed real-time chart.	
Year mode	to show the bar chart yearly	in 3D mode
Month mode	to show the bar chart monthly	in 3D mode
Day mode	to show bar chart daily	in 3D mode

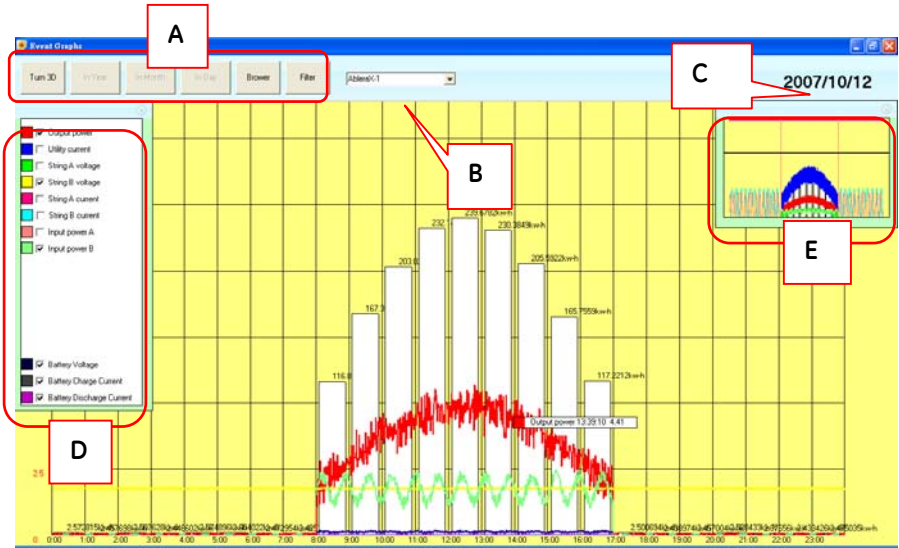
B. Machine Selection: to select the graphics of the corresponding inverters.

C. Current Time: date of the object you are watching.

D. Scrolling Time Bar: There are three modes, year mode, month mode and day mode. In Year Mode, the maximum time that might present is 5 years. In Month Mode, the maximum time that might present is 12 months and in day mode, the maximum time that might present is 31 days(varied from 28 days to 31 days)

5.4.2 2D Mode

2D chart illustrates all the information of the inverter, such as the output power, output current, DC input voltage, and DC input



Operation Instruction:

- Left-click and drag to move the window
- Right-click and drag to zoom in/out the window
- Put the mouse cursor on the curve you want to see ,it shows the detailed information of the point cursor indicated.

A. Control Button:

Button	Description	Remarks
turn 3d	camera works in 3d mode.	
browser	open the browser	in 2d mode
filter	open the filter	in 2d mode

B. Machine selection: selecting the corresponding inverter of the curve chart.

C. Current time: date of the object you are watching.

D. Filter: To display the selected curves. click  to close the filter.

E. Browser: Black frame area means the area that is browsed from the whole graphics. When the mouse is put within the browsed area, the camera will move when the cursor is Left-clicked and dragged. Click outside of the browsed area, the screen turns to indicate the area that the cursor of the mouse pointed to. Click  to close the browser.

5.5. SMS



The “SMS” function provides short message service via internet in case of any event. An alert message of recorded event will be sent to the mobile through the server of a subscribed short message service provider.

This SMS function is only available through third-party Short Message Service Providers. At the moment, SVT Monitoring Software supports “Every8d” , “Clickatell” and Voichaep. For more information on subscriptions and charges, please go to their respective websites as follow:

[**Every8d**]: <http://www.every8d.com/>. Subscribe as “Corporate” account in order to be able to use with the SMS function of SVT Monitoring System.

[**Clickatell**]: <http://www.clickatell.com/>. Pay to obtain an “api_id” before use.

[**Voipcheap**]: <http://www.voipcheap.com/>.

A. Sent Test: Click to send a test message to confirm the settings are correct.

B. Account Settings: Key in the SMS provider name, ID, passwords, “api-id” (for Clickatell subscriber only) and mobile phone number (international dialing format, include “+” or “00” and country code).

C. Event & Message Selections: Click to select the desired Events to be broadcasted and also their respective messages (You can change and retype the Message to meet your requirement.).

D. Save Setting: Click [save] to save & apply settings.

Note: Internet Firewall may block this SMS function. If the Firewall is installed, make sure it won't be blocked by it.

5.6. E-Mail Settings



A. Sent Test: Click to send a test message to confirm the settings are correct.

B. Account Settings: Enter the Mail Server name (or IP address), User Name, User Email (select a sender email address specifically for this function), Receiver Name (select a predetermine email address the event messages will be sent to) and Subject.

C. Event & Message Selections: Click to select the desired Events to be broadcasted and also their respective message (You can change and retype the Message to meet your requirement).

D. Save Setting: Click [save] to save & apply settings.

Note: Internet Firewall may block this E-Mailing function. If the firewall is installed, make sure it won't be blocked by it.

5.7. About



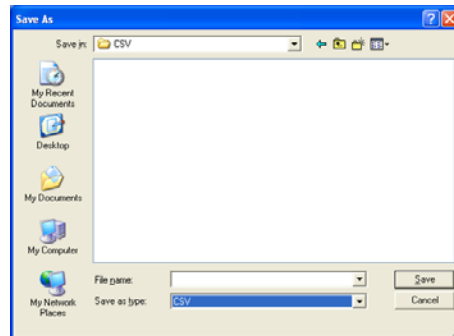
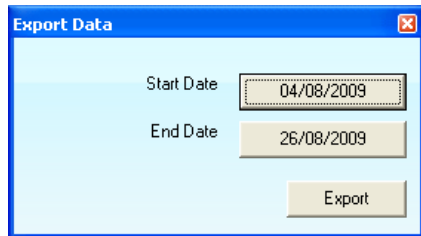
Click to see the version number and name of the SVT monitoring system when the “web server” function is enabled. You can then activate the Internet explorer and enter the IP address to log into the home page of the SVT’s Monitoring System.



5.8. Operating Icons



To export data (into Comma separated values) and make analysis in other software.



5.9. Operating Icons

Upon the SVT Monitoring Software is running normally, those icons indicated below will appear at the right bottom corner. Each of these icons represents the current status of the inverter. Place the mouse cursor over the icon to see the details of each status. Double left-click the icon to open Monitoring Display page and right-click to close and exit from the SVT. The various icons are shown below:

Icons	Status Details
	SVT Running Ok
	SVT alert
	SVT fault

6. Remote Monitoring & Control via Internet

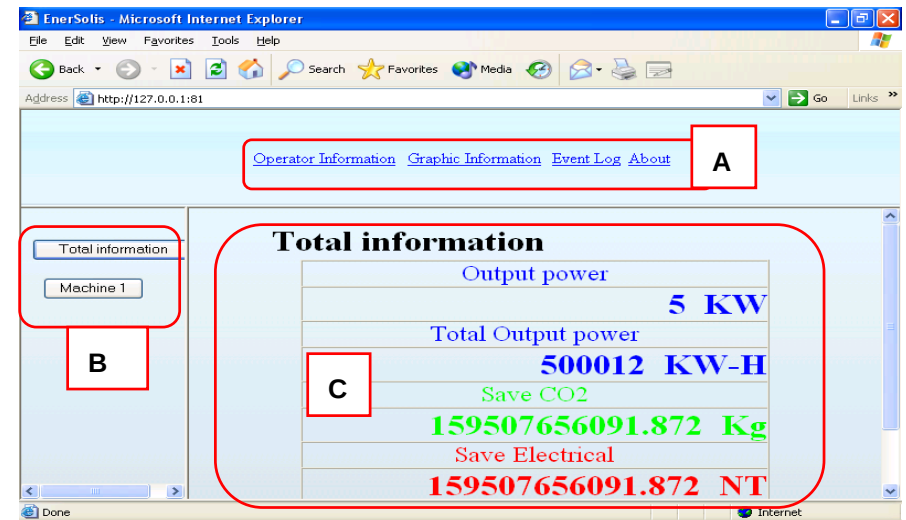
SVT Monitoring System can be configured as virtual web server allowing user to monitor & control the inverter remotely via internet at any computer terminal that is not installed with the SVT Monitoring System..

To use this remote monitoring function, first go to the “System Configuration” page of the SVT Monitoring System, enable the “web server” function and re-start the software and access at address <http://your IP:81> for remote monitoring.

You can obtain the IP address from the ‘about’ window (see section 2.8) or check the e-mail sent. You can then activate the Internet explorer at any remote computer terminal and enter the IP address to log into the home page of the SVT Monitoring System.

Note: Internet Firewall may block this remote monitoring function. If the Firewall is installed, make sure it won’t be blocked by it.

6.1. Real Time Status Automatically Update



A. Function Menu

It provides with accesses of various functions as below:

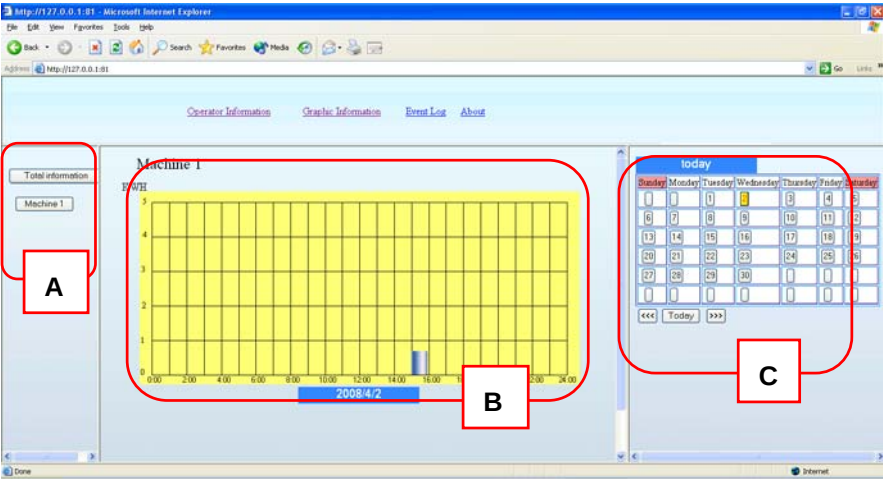
item	description
Operator information	for real time monitoring information linking.
graphic information	for real time bar chart monitoring linking.
event log	To provide a list of historic records of all the events occurred.
about	click to see the version and copyright of the SVT monitoring system.

B. Information Menu: select a specified inverter that needed to be Real Time monitoring, or offer overall information for all inverter(s).

C. Monitoring Info: Display the power information of the selected inverter in 『information menu』.The information is updated every 3 seconds.

6.2. Real-time Bar Chart

To display the daily output power of the inverter with bar chart. And select the monitored date desired to review all information in the past.

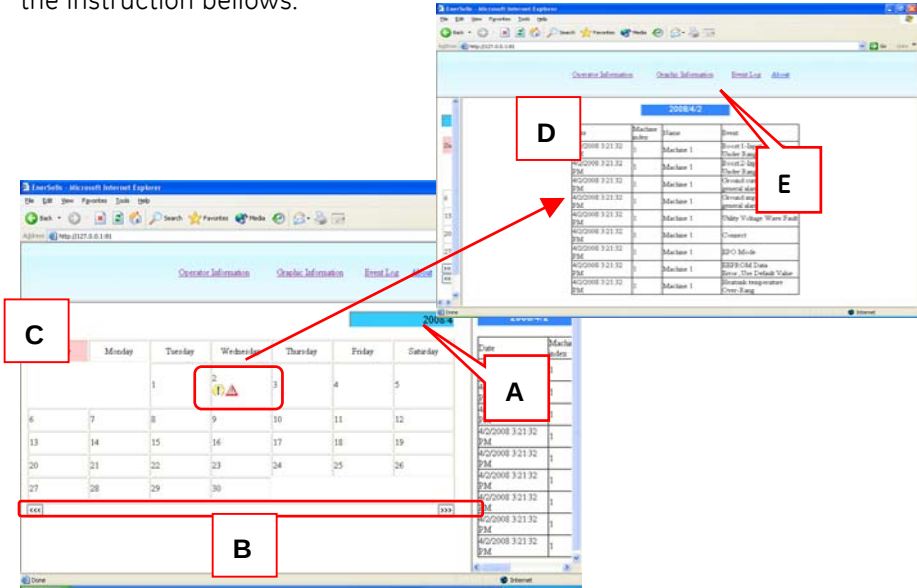


- A. Information Menu: select the inverter desired to be monitored or overall output power generated.
- B. Bar Chart: to display real-time bar chart of the inverter selected. The bar chart will be updated every 10 seconds automatically. For detailed

information, you may move the mouse cursor over the desired bar.
C. Date Selection: select the desired monitoring date.

6.3. Event Log

The “Event Log” function provides a fast preview of those events occurred in the entire month. To view all status of the events quickly, you may follow the instruction bellows.



- A. Year/Month Display: Display the month and year of the current calendar page.
- B. Year/Month Selection: Click [<<<] to display previous month calendar, click [>>>] to display coming month calendar. The events occurred will be recorded and shown symbolically on the calendar dates. Move the mouse cursor over each symbol and its description will be displayed. You can refer to the below table for reference.
- C. View/Edit: Click the dates on the calendar page to view or edit event entries. Referring 2.4. for more details.
- D. Event Records: To display the event occurred in the particular date selected.
- E. Date of Event: It is to show the event just occurred in 『Event Records』.

6.4. About

Click to see the SVT software version number and proprietor name.



7. Installation Troubleshooting

7.1. Symptom One

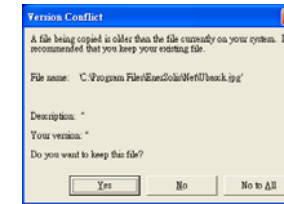


When this Warning message is shown, close other program under application, re-install the software or restart system and install again.

Or click "Ignore" to cease the installation of this software and the warning message will be shown as below. Click "YES" to install or click "NO" to go back to the warning message as above.



7.2. Symptom Two



When this Warning message is shown, it means the software has already existed in the computer. Click "YES" to keep the existing software without overlapping it or "NO" to install a new software and overlap it. Click "No to all" to install new software and overlap the old one during installation process.

7.3. Symptom Three

The below window will pop up if SVT or its related applications are still under running while uninstalling. Please click [OK] to close all SVT software to continue uninstall command.

