



Model PC-2-T1 Solar Radiation Monitoring System



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Chapter 1. System Introduction

1.1 Computer Hardware Requirement

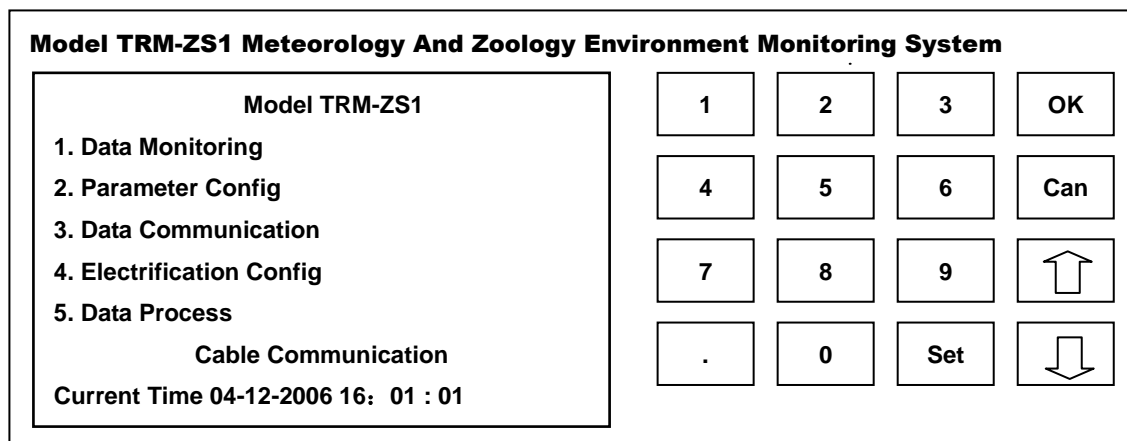
CPU	Pentium 500 mHz
Memory	128M
Hard Disk	More than 300MB free space
RS232 Serial Port	

1.2 Computer Software Requirement

Operation System	Windows 2000 or higher
IE	Internet Explorer 5.01 or higher

Chapter 2. Recorder Introduction

2.1 The Front Panel and Back Panel of Recorder



The front panel of Recorder

Transducer	Sign
Pyranometer	TBQ
Scatter Radiometer	TBD
Pyrheliometer	TBS
Net Radiometer	TBB
Refractometer	TBF

Just connected the cable to the interface of recorder.

Illustration:

Can – Cancel

COM – Serial port

1 – DC 12V

2 – Battery

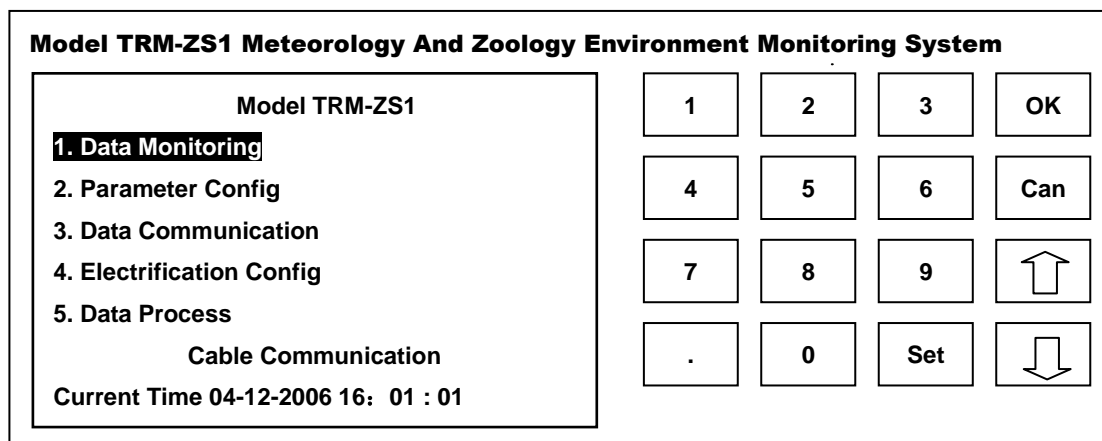
3 – AC220

2.2 Specifications

Element	Resolution (Instantaneous value)	Resolution (Accumulative value)	Range	Accuracy
Radiation	1W/m ²	0.01MJ/ m ²	0 ~ 2000 W/m ²	<5%

Chapter 3. Operation Instruction

It displays Real-Time Monitoring status while the user turn on the recorder. If the time of recorder is different from local time, choose 'Time Setting' from 'Recorder Setting' menu at the computer software to modify date and time of the system to recorder.



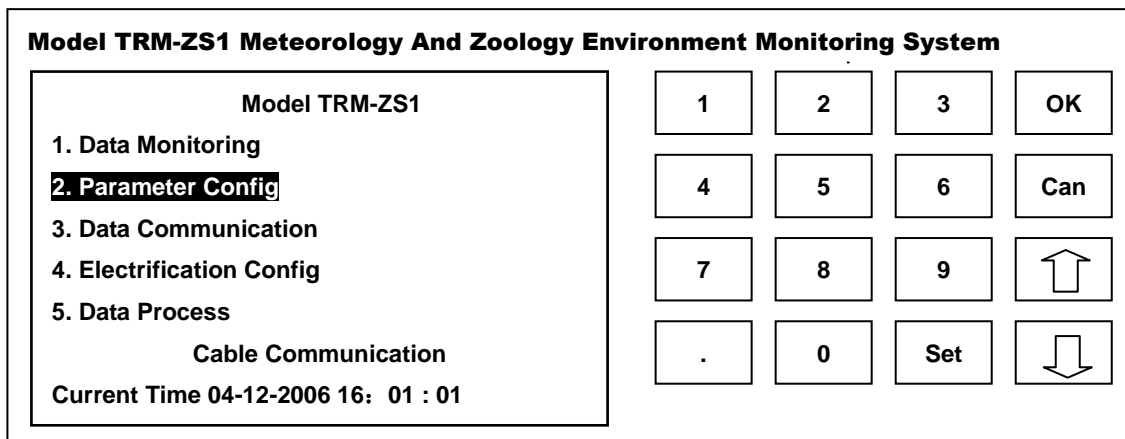
3.1 Data Monitoring

After choosed the item, press 'OK' button to start monitoring. If the first monitoring day is not current day, recorder displayed 'Whether to continue add up accumulative value? ', it means whether add up the accumulation value to historical data, click 'OK' or 'Cancel' button.

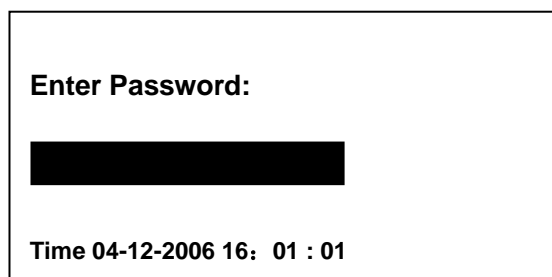
On monitoring status, press '↑' and '↓' button to page up and page down, got more monitoring results of transducers.

Clicked 'cancel' button to exit the testing status, system shows that 'Exit real-time monitoring?', click 'OK' to exit or press 'cancel' button.

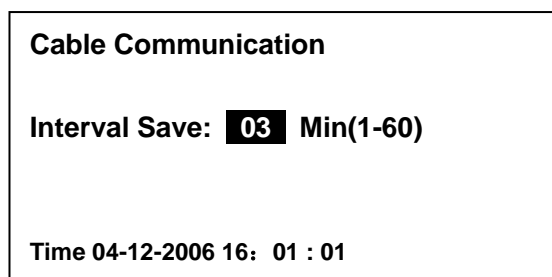
3.2 Parameter Config



The recorder will show picture below when the item has been selected.



The password is '168', then press 'OK' button, recorder shows below.




The function means that how long will the recorder stores value of transducers to memory. Press 'cancel' button, delete the data error inputted or exit. Setting stores in the recorder when finished modified after press 'OK' button.

3.3 Electrification Configuration

Control the battery start or stop charging. Charging time as 10 hours, can also control with the system software.

Note: The expression meaning of the battery symbol of the upper right corner of LCD is as follows:

- a、 Electric consumption is insufficient

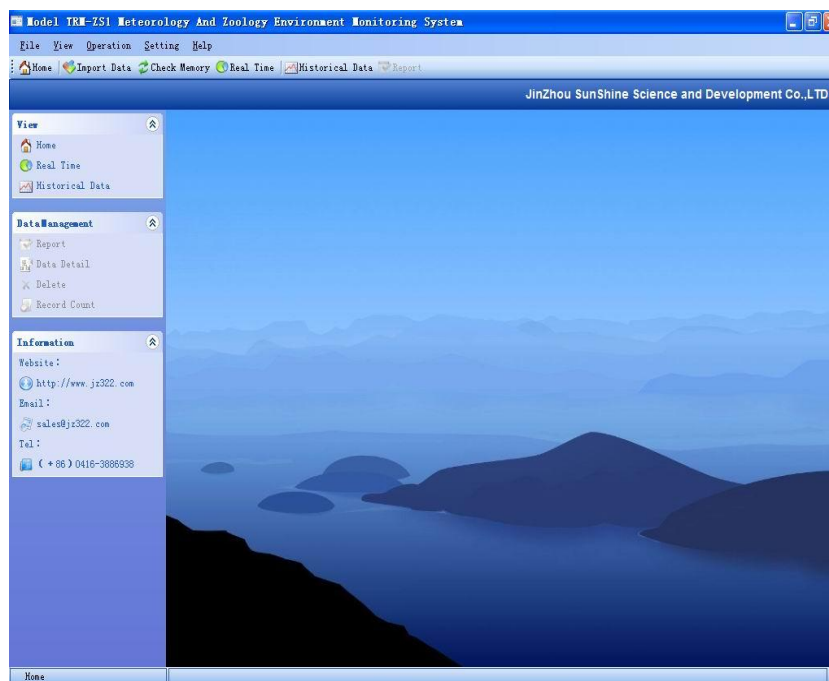
b、 Quantity of electricity

c、 Battery charging

3.4 Data Process

The item includes 'Examine the data storage' and 'clear memory'. The password of 'Clear Recorder Data' is '168'.

Chapter 4. Software Instructions



4.1 File

4.1.1 Export Report Files

The function could export report files when you select a data file(or some data files).

4.1.2 Backup Database

Backup the database to another place. Rename the database name to 'data.mdb' and replace the file which the system installed path (the default path is C:\Program Files\eSerialPro\) to restore the database.

4.2 View

4.2.1 Home

Recorder could be setting use the software only under the view status.

4.2.2 Historical Data

Data imported from recorder memory stores in the view.

4.3 Operation

4.3.1 Real-time Monitoring

Click 'Recorder Operation' and select 'Real-time Monitoring' to run the function. The function is use for dynamic display instantaneous value of the key testing element of environment.

4.3.2 Check Memory

Click 'Operation' from main menu, then click 'Connection' item. It can check data in the memory of recorder.(for example: there are 2600 records in the memory).

4.3.3 Manual Electrification

The operation takes about 10 hours for electrification. Do not halt the power of recorder during this period.

Attention: Halt the back light of LCD when charging.

4.3.4 Import Recorder Data

Click 'Operation' and choose 'Import Data' item, software will import all data from recorder automatically.

4.3.5 Clear Recorder Memory

Click 'Import Data' and select 'Clear Recorder Data'. The operation will clear memory of recorder to empty.

4.4 Setting

4.4.1 SerialPort Setting

The serial port number of computer which connected the serial port of recorder with.

4.4.2 Calibration

The function used for as transducers' value are different from actual value. To adjust to a desired value.

4.4.3 Recorder Timer Setting

The function sets recorder time to current computer time.

4.4.4 Real Time Interval Setting

The function means that how many time interval will the recorder stores value of transducers to memory.

Chapter 5. Troubles and Maintenance

1. Trouble phenomena: Recorder cannot set up an electric circuit.

Solution:

- a. Please examine carefully whether the power line has been connected successfully.
 - b. Please examine the storage battery of recorder have any electric power. Please charge them through artificial charge method when A.C. power source is provided.
2. Trouble phenomena: the main computer appears the state of dead or indicates user to examine serial port when recorder is operated through computer.

Solution:

- a. Examine whether the communication cable between recorder and computer is connected successfully or the serial port of computer is damaged.
 - b. Cut off the power source of computer and recorder and then turn on it again.
3. Trouble phenomena: the data and time inputted is confused.

Solution:

- a. Cut off the power source of computer and recorder and then turn on it again.
 - b. Input time into recorder again.
4. Trouble phenomena: the open time of transferred data is not in accordance with the actual open time or the data is lost. The reason is that A.C. power source is cut off again when making quick charge.

Solution:

Avoid quick charge when the A.C. power supply is cut off frequently. Start to charge after the A.C. power is stable.

5. If user encounters any trouble that you cannot solve, please do not disassemble recorder by yourself and communicate with manufacturer or maintenance worker promptly.

6. Take the shielded cable as the plug of output conducting wire and the shielded layer has to be connected with ground.

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