



# ALIAPANEL

## Paperless Recorder

### Model ARC800 Series

# Operation Manual



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## 1. Features

### GENERAL

**ALIAPANEL** ARC800 Series Paperless Recorder features the most advanced technology. It can be applied across a broad scope of industrial applications. ARC800 is the product which with multi-channels, complete functions, easy operation, high accuracy, low power but high performance. And the series overcome the old-fashioned paperless recorder, which has less channels, multiple installation and space-consuming problem.

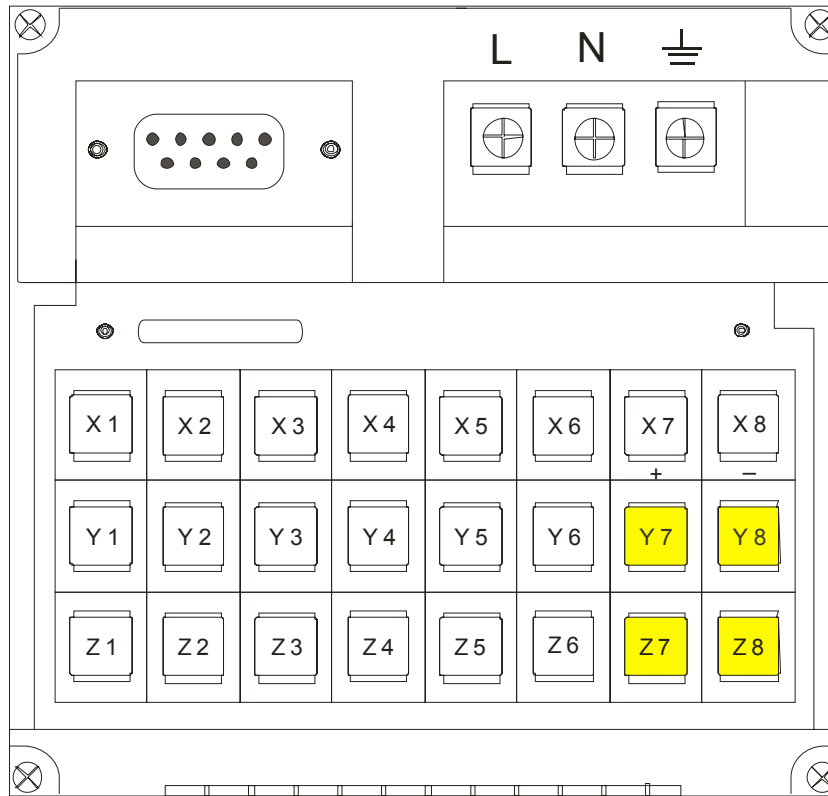
### FEATURES

- DIN Size (96mm\*96mm), 320\*240 Pixels, TFT truecolor (LCD)
- 4MB memory installed inside, applied to long terms data record
- Common input signal: mA, Include VDC, T/C, RTD, Hz etc.
- High Accuracy +/-0.15% of Reading
- 2 relay outputs, 1 analog output (4-20mA), 1 (24VDC) power supply output
- 4 channels Max.input
- 24VDC Aux. Power supply available for 2 wires system
- Display / Record Single-point, Multi-point, Trend, Totalizer, Bargraph
- The recorded data could be stored in USB memory & SD memory card and transferred to computer for soft analysis

### STANDARD SPECIFICATION

- |                        |  |                        |   |
|------------------------|--|------------------------|---|
| ● Number of Inputs     | : 1- 4 Channels  | ● Display              | : 3.5" color-screen LCD                     |
| ● Input                | : T/C (K, S, B, E, J, N, T, R, N, etc.)                            | ● Trend & Bargraph     | : Vertical / Horizontal                     |
|                        | : RTD, CU50, CU53, BA1, BA2  | ● Digital              | : 4-1/2 digits programmable                 |
|                        | : DCA (4-20 mA, 0-10 mA, 0-20 mA)                                  | ● Engineer Unit        | : 66 different engineering units            |
|                        | : DCV ( 0-5V, 1-5V , 20mV, 100mV)                                  | ● Parameter Protection | : Password entry (6 Digits)                 |
|                        | : Frequency (1Hz ~ 5KHz)   | ● Logging Rate         | : 1 Second ~ 1800 Seconds Per Data          |
|                        | Resistance (0-400 Ω)   | ● Recording Capability | : 72 Hours (4 Points, 1 Data/Second)        |
| ● Accuracy             | : +/-0.15% of Span   |                        | : 118 Years (1 Point, 1 Data/Hour)          |
| ● Response Time        | : 50 ms  | ● PC Software          | : Windows 2000/XP/Vista/Win7                |
| ● Alarm Types          | : High & Low alarm, Incr. & Decr. alarm                            | ● Display              | : Trend, Digital, Circular, Alarm, Bargraph |
| ● Output               | : 4-20 mA, Load 750 Ω *1 point                                     | ● Totalizer            |   |
|                        | : Relay, 3A/250V * 2 points  | ● Convert Function     | : Saved as excel files                      |
|                        | : 24VDC, 60 mA *1 point  | ● Protection Class     | : NEMA 3 / IP 54                            |
| ● Digit Input          | : 2 Points Maximum   | ● Weight               | : 0.5 Kg Maximum                            |
| ● Storage Memory       | : 4 MB (on board)  | ● Dimensions           | : 96mm (W) * 96 mm (H) *110 mm (D)          |
| ● Recycling Mode       | : Newest Data overwrites to oldest data                            | ● Ambient Temperature  | : -10 ~ +60 °C                              |
| ● Recording Data Shift | : USB memory (8GB) / SD Card (4GB)                                 | ● Ambient Humidity     | : 10% ~ 85%RH (5 ~ 40 °C )                  |
| ● Display Update Rate  | : 1 Second   | ● Power Supply         | : 85-260VAC, 50/60Hz                        |
| ● Keyboard             | : 6 Keys (Page, Left, Right, Up, Down, Enter)                      |                        | 24VDC                                       |
|                        | for programming and display control                                | ● Vibration Test       | : 10~60Hz ,10m/S <sup>2</sup> for 3 hours   |
| ● Parameter Storage    | : Operation parameters are stored by EEPROM for more than 10 years | ● Power Consumption    | : ≤10 W                                     |
|                        |  | ● Communication        | : RS232 / RS485 (MODBUS Protocol)           |

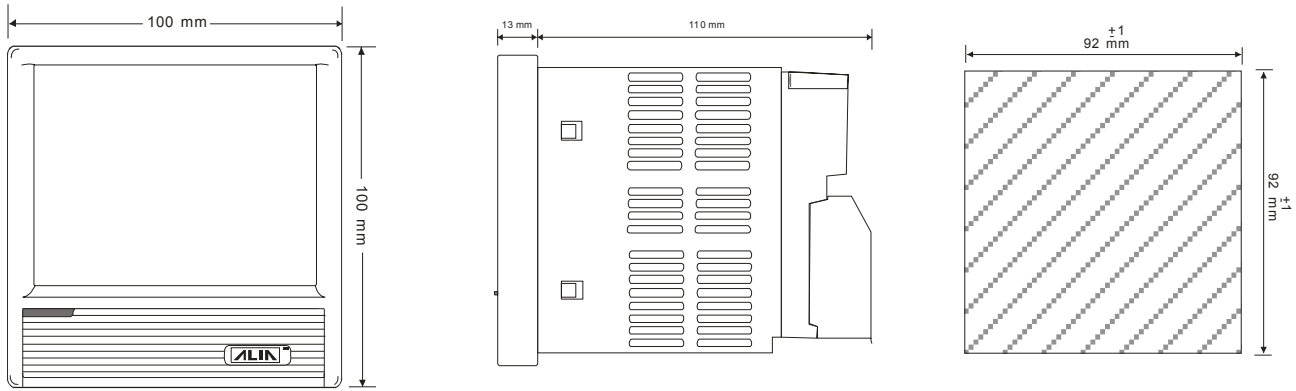




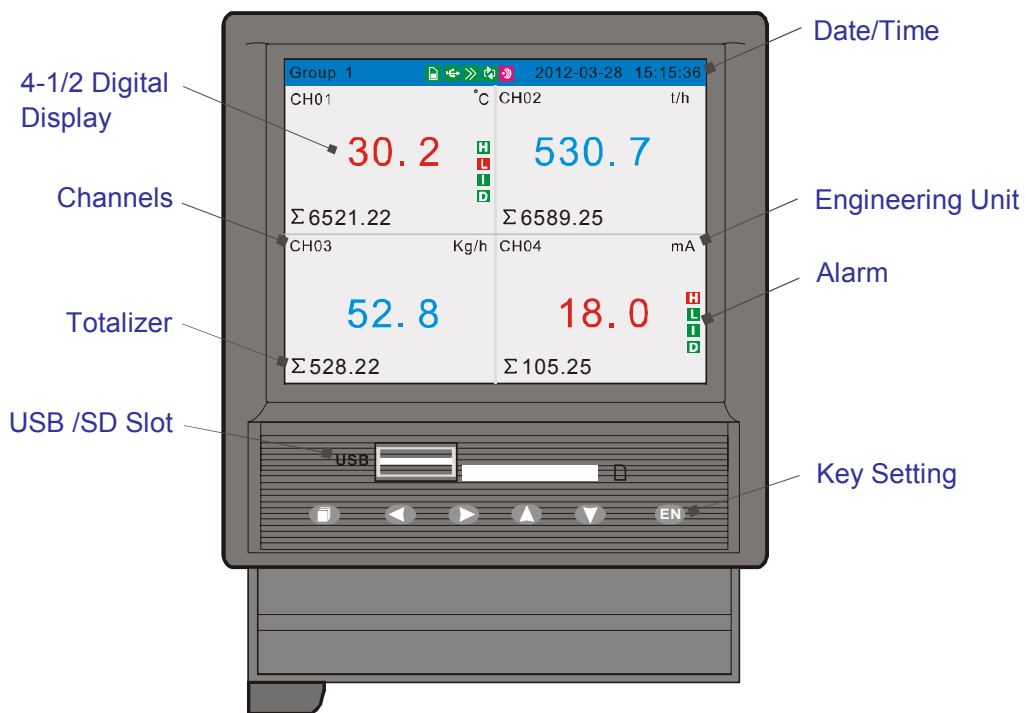
Input		Terminals	
	Channel 1-4	X1 / Y1 / Z1 .... X4 / Y4 / Z4	
	Frequency	Y5 / Z5	
	Relay Channel 1-2	Y7 / Z7 , Y8 / Z8	
	4-20 mA	X5 / X6	
	24VDC	X7 / X8	

Output		

### 3. Dimensions

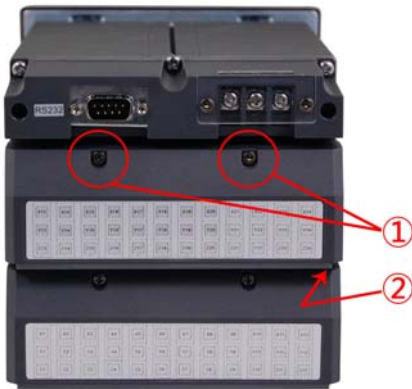


### 4. Key Settings

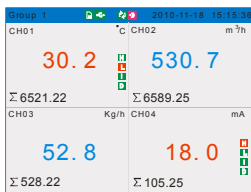


Key Name	Key Sign	Basic Function	Setting Function
Page Turning & Quit		Page Turning & Quit	Page Turning & Quit
Left/Right		Left/Right Move	Left/Right Move
Up/Down		Up/Down Move	Up/Down Move
EN		Confirmation	Confirmation

1. Loosen the 2 screws in the cover; 2. Gently push the cover by screwdriver or by hand.

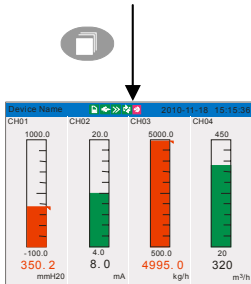


## 5. Display Type



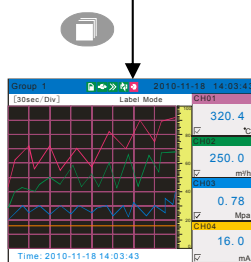
### Multichannel Display

Press to next page.



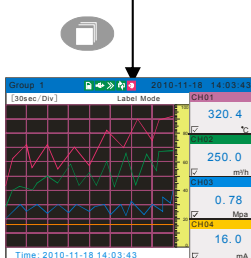
### Bar Chart Display

Press to next page.



### Real-time Curves Display

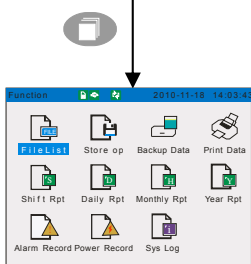
Press to next page.



### Historical Data Display

Press **EN** and press or to modify date; press or to check channels & historical data.

Press to next page.



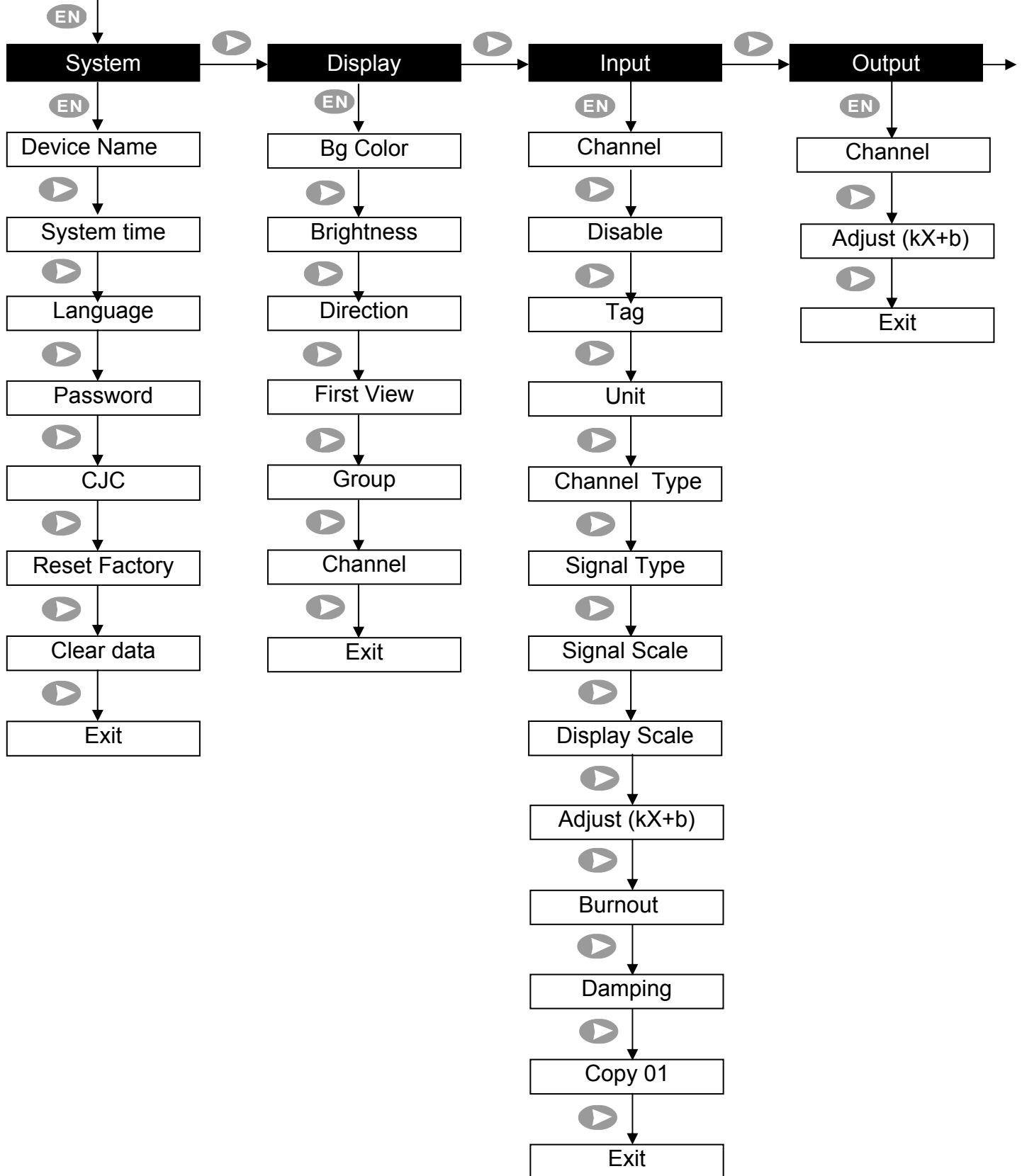
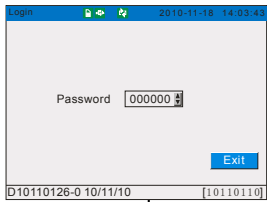
### Function Pictures Display

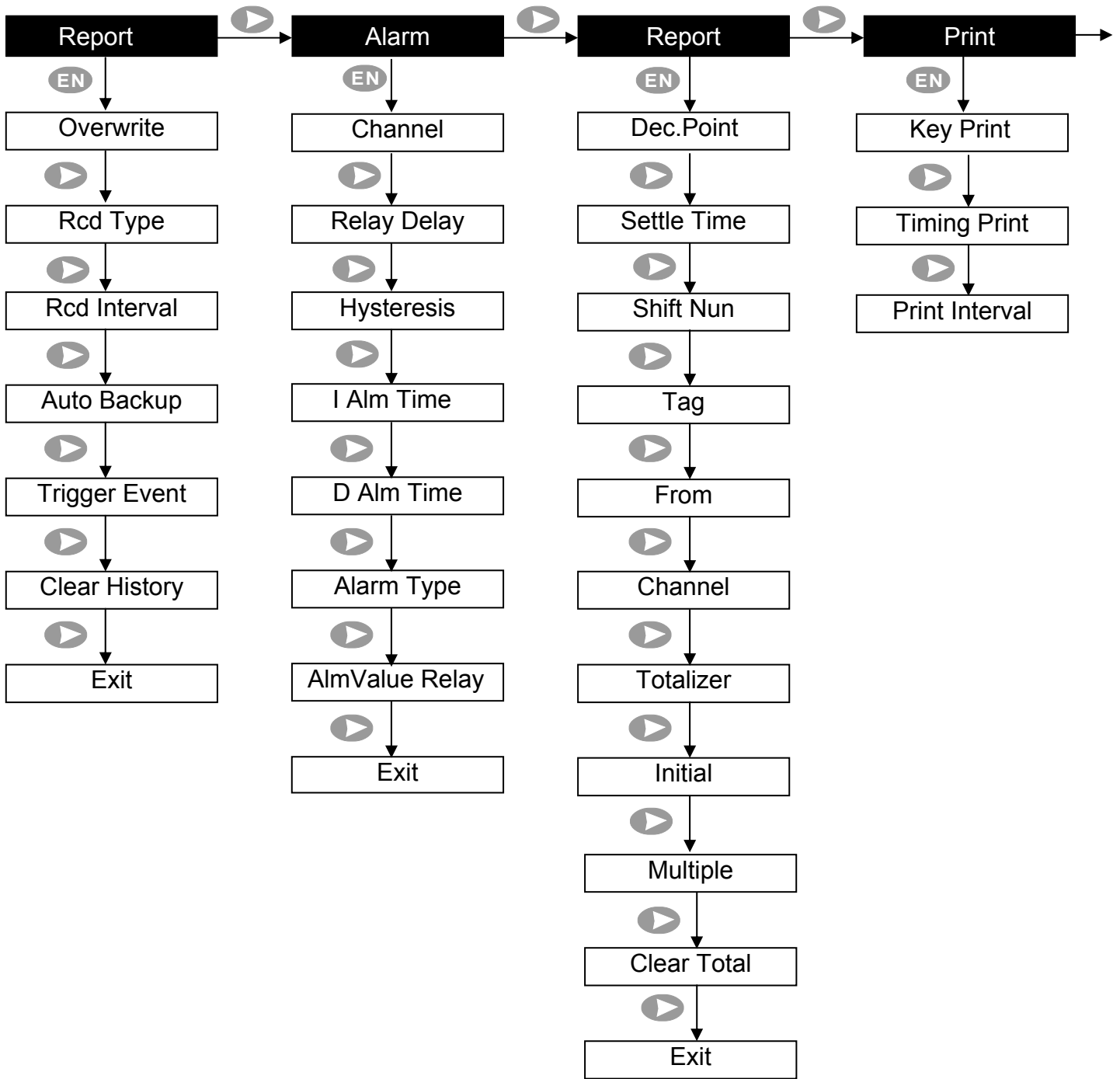
Press or to check listed files, storing operation, backup, print, shift rpt., daily rpt., monthly rpt., year rpt., alarm record, power record and system log.

Press **EN** to check or backup data, and press to exit.

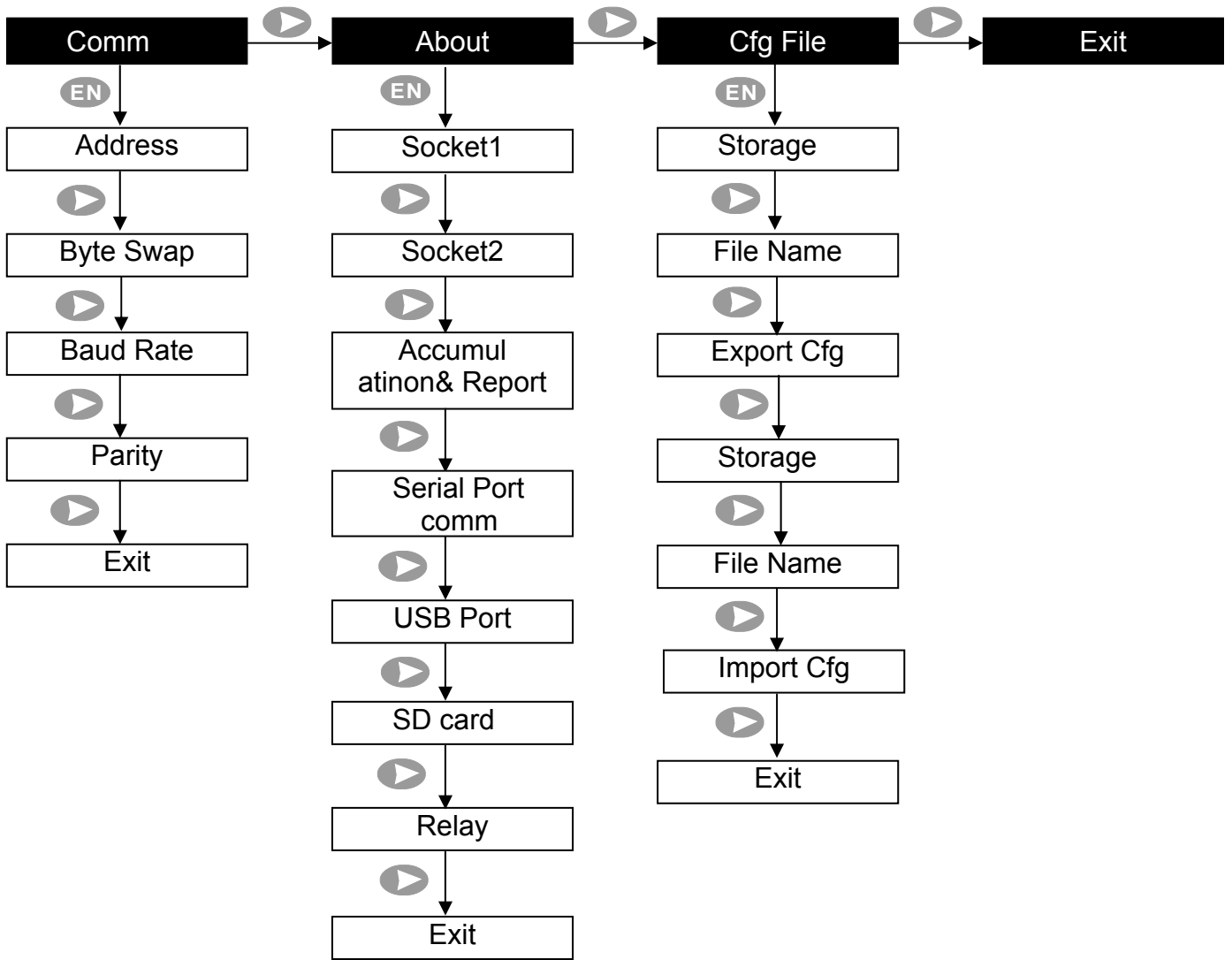
Press to next page.

### 6. Flow Chart



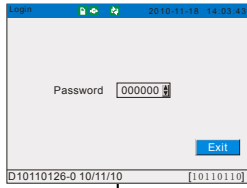




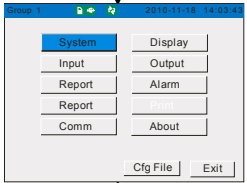


## 7. Operation Instructions

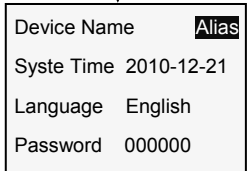
### 7.1 System Configuration Settings



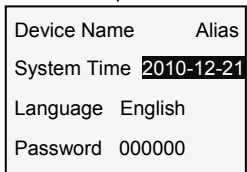
EN



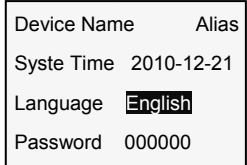
EN



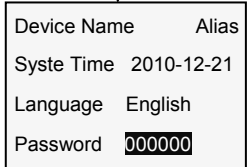
▶



▶



▶



▶



▶

#### Input Password

In running mode, press & at the same time to login password.  
Press or to move cursor, press or to set value (Initial password:000000)  
Press to enter next setting.

#### System Configuration

Press or to move cursor, choose System, press to enter System Configuration and press to quit.  
Press to enter next setting.

#### Device Name

Press or to move cursor, press to enter Device Name for modification.  
Press to enter next setting.

#### Time

Press or to move cursor, press or to modify date and time.  
Press to enter next setting.

#### System Language

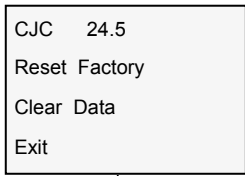
Press or to choose and for confirmation. English and Chinese are available.  
Press to enter next setting.

#### Password Setting

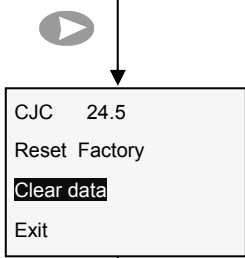
Press or to move cursor, press or to set password. Password is necessary if configuration parameters need to be input and it's used for preventing system parameters from being changed accidentally.  
Press to enter next setting.

#### Cold Junction Compensation

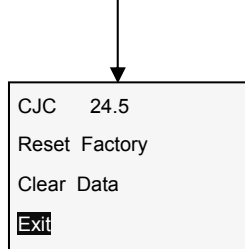
Press or to move cursor. Cold junction compensation is to compensate temperature of thermocouple in cold junction . It can be set as auto or manual mode.  
Press or to change value, press to enter next setting.



**Factory Reset**  
 Press **EN** and “reset the configuration?” will pop up, choose Yes to save and No to deny. Except system log data, factory reset will clear all internal storage data including historical data, totalizer, total report, alarm list and power off record and so on.  
 Press **▶** to enter next setting.

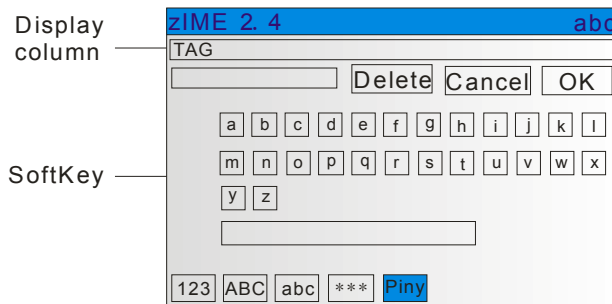


**Clear Data**  
 Press **EN** and “purge all the data?” will pop up, choose Yes to save and No to deny. What different from factory reset is that all configuration data can not be initialized.  
 Press **EN** to confirm the choice and all the data will be cleared.  
 Press **▶** to enter next setting.



**Exit**  
 Press **EN** and “save the configuration?” will pop up. Choose Yes to save and No to deny.  
 Press **EN** to confirm the choice.

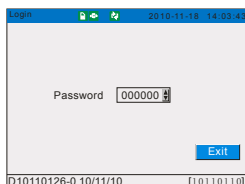
**Input Number/ Capitalized Alphabet/Lowercase Alphabet/ Specific Symbol**  
 Used when to input range, unit and tag.



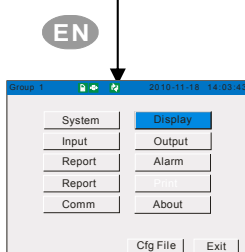
**Procedures:**

- [**◀**][**▶**]: Move cursor in softkey area or choose key-in mode (it includes function, Pinyin Keyboard).
- [**▲**][**▼**]: Cursor on alphabet, shifting to chosen alphabet.
- [**☐**]: If no key-in, cursor will shift to **【OK】** column;
- [**EN**]: When cursor is on number/alphabet/symbol, press this column to input contents.
- Cursor on **【Delete】**: Delete the last character in input column.
- Cursor on **【Cancel】**: Exit from input column and cancel input.
- Cursor on **【OK】**: Exit from input column and confirm input.
- Cursor on certain keyboard means choose that keyboard.

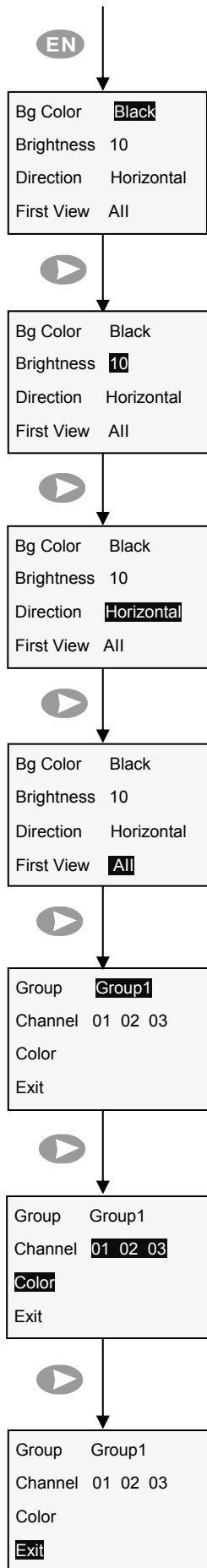
**7.2 Display Configuration Settings**



**Password Input**  
 In running mode, press **☐** & **EN** to login Password.  
 Press **◀** or **▶** to move cursor, press **▲** or **▼** to set value (Initial password:000000).  
 Press **EN** to enter next setting.



**Display Configuration**  
 Press **◀** or **▶** to move cursor, choose Display & **EN** to enter Display Configuration;  
 choose **☐** to exit Display Configuration.  
 Press **▶** to enter next setting.



**Background Color**  
 Press ◀ or ▶ to move cursor and press ▲ or ▼ to choose background color. Black color and white color are available.  
 Press ▶ to enter next setting.

**Brightness (1~10)**  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to change brightness. The higher the value is, the brighter the screen will be.  
 Press ▶ to enter next setting.

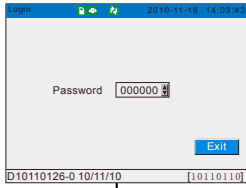
**Curve Direction (Horizontal or Vertical)**  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose curve direction. If horizontal, curve will extend to X-drection; if vertical, Y-direction.  
 Press ▶ to enter next setting.

**First View**  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose first view, and press EN to confirm. All view, bar, real time curve, history curve, function view are access to check.  
 When start, first view will be displayed as you what you set before.  
 Press ▶ to enter next setting.

**Group Display**  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose group, and press EN to confirm. The set group will be seen in history curve page and real time curve page.  
 Press ▶ to enter next setting.

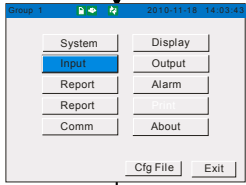
**Channel**  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose channel and then color. It will displayed for the chosen channel. 1~4 channels can be chosen at the same time and displayed in history curve page and real time curve page.  
 Press ▶ to enter next setting.

**Exit**  
 Press EN and "save the configuration?" will pop up. Coose Yes to save and No to deny.  
 Press EN to confirm choice.



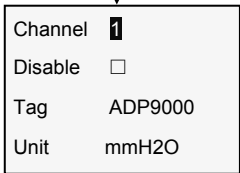
**Password Input**

In running mode, press & **EN** to login password.  
 Press or to move cursor, press or to set value (Initial password:000000).  
 Press **EN** to enter next setting.



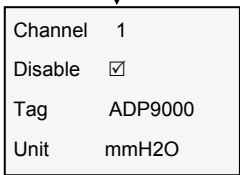
**Input Configuration**

Press or to move cursor to choose Input, press **EN** to enter input configuration and press to exit .  
 Press to enter next setting.



**Channel**

Press or to move cursor and press or to choose channel.  
 The input channel should be conformed with this chosen channel, please refer to page 4 in manual. Press to enter next setting.



**Channel Disable**

Press or to move cursor and or to choose  to close channel display.  
 If disabled, all view, bar, real time curve and history curve of this channel will not be shown.  
 Press to enter next setting.



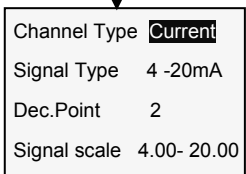
**Tag Display**

Press or to move cursor, press **EN** to modify tag. 15 characters are available to to be input in total. Chinese and English also can be input together.  
 Press to enter next setting.



**Engineering Unit**

Press or to move cursor, press or to choose engineering unit and **EN** to confirm. This channel unit is not calculating but just for displaying. 7 characters in total. Support Chinese-English combined input or specific symbol.  
 Press to enter next setting.



**Channel Type**

Press or to move cursor, press or to choose channel type and **EN** to confirm. Please choose corresponding channel type including current, voltage, resistance, frequency, square root.etc. based on 4<sup>th</sup> page in manual. Square root calculation means the square root of measuring signal's percentage.  
 Press to enter next setting.



Channel Type	Current
Signal Type	4-20mA
Dec.Point	2
Signal scale	4.00- 20.00



Channel Type	Current
Signal Type	4-20mA
Dec.Point	2
Signal scale	4.00- 20.00



Channel Type	Current
Signal Type	4-20mA
Dec.Point	2
Signal scale	4.00- 20.00



Display Scale	4.00- 20.00
Adjust(kx+b)	1.00 0.00
Burnout	— . — —
Damping	0.0 sec



Display Scale	4.00- 20.00
Adjust(kx+b)	1.00 0.00
Burnout	— . — —
Damping	0.0 sec



Display Scale	4.00- 20.00
Adjust(kx+b)	1.00 0.00
Burnout	— . — —
Damping	0.0 sec



Display Scale	4.00- 20.00
Adjust(kx+b)	1.00 0.00
Burnout	— . — —
Damping	0.0 sec



### Signal Type

Press or to move cursor, press or to choose signal type and to confirm. Choose corresponding signal type according to input signal. If signal type as thermocouple and resistance, signal scale is not editable.  
Press to enter next setting.

### Decimal Point (0~3)

Press or to move cursor, press or to choose value.  
The more decimal point is, the lower input value will be.  
Press to enter next setting.

### Signal Scale

Press or to move cursor, press to modify signal scale. (Note: Signal scale usually do not change.)  
Press to enter the next setting.

### Display Scale

Press or to move cursor, press to modify display scale and to confirm.  
Display scale is set based on the display scale of external instrument.  
Press to enter next setting.

### Adjust (kx+b)

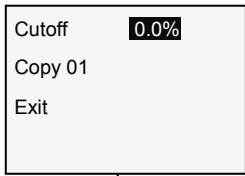
Press or to move cursor, press to adjust(kx+b) and to confirm.  
Engineering data is fine adjusted in linearity by  $y=kx+b$ , usually it's recommended to adjust b value. Press to confirm. Press to enter next setting.

### Burnout

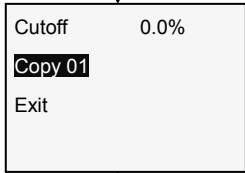
Press or to move cursor, press or to choose burnout type, and press to confirm. Burnout is only valid to III signal type, thermal resistance and thermocouple.  
Press to enter next setting.

### Damping (0~9.9s)

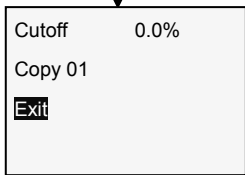
Set damping response. The higher the value is, the more stable instrument will be.  
Press or to move cursor, press or to choose value, and press to confirm. Press to enter next setting.



**Low Cutoff (0~9.9%)**  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose value, and press **EN** to confirm. Signals that are lower than setting cutoff value will be regarded as zero.  
 Press ▶ to enter next setting.



**Copy 01**  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to copy parameters from other channels, and press **EN** to confirm.  
 Press ▶ to enter next setting.

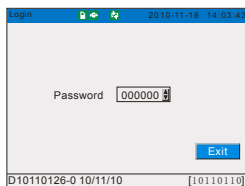


**Exit**  
 Press **EN** and "save the configuration?" will pop up. Choose Yes to save and No to deny.  
 Press **EN** to confirm choice.

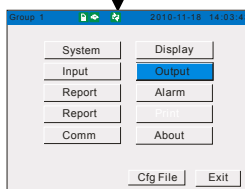
Channel Type&Signal Type

Channel Type	Signal Type	Calculation
Current	0~20mA, 4~20 mA, 0~10 mA	Linear Calculation
Voltage	0~5V, 1~5V, 20mV, 100mV	Linear Calculation
Resistance	400 ohm	Linear Calculation
Frequency	Fr ,	Linear Calculation
Thermal Resistance	PT100, CU50, CU53, BA1, BA2	None
Thermocouple	S, R, B, K, N, E, J, T, WRE5-26 WRE3-25, F1, F2	None

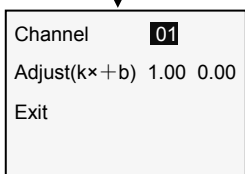
7.4 Output Configuration Settings



**Password Input**  
 In running mode, press **EN** & **EN** to login password.  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to set value (Initial password:000000).  
 Press **EN** to enter next setting.



**Output Configuration**  
 Press ◀ or ▶ to move cursor to choose Output, press **EN** to output configuration, and press **EN** to exit.  
 Press ▶ to enter next setting.



**Channel**  
 Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose channel.  
 Press ▶ to enter next setting.



Channel 01  
 Adjust(k×+b) 1.00 0.00  
 Exit



Channel 01  
 Adjust(k×+b) 1.00 0.00  
 Exit

**Adjust (k×+b)**

Press or to move cursor, press to adjust (k×+b). Actual output current = k \* original output current+b. Press to confirm.  
 Press to enter next setting.

**Exit**

Press and “save the configuration?” will pop up. Choose Yes to save and No to deny.  
 Press to confirm choice.

**7.5 Record Configuration Settings**

Login  
 Password 000000  
 Exit



Group 1  
 System Display  
 Input Output  
 Report Alarm  
 Report  
 Comm About  
 Cfg File | Exit



Overwrite Yes  
 Rcd Type Real  
 Rcd Interval 1 sec  
 Auto Backup



Overwrite Yes  
 Rcd Type Real  
 Rcd Interval 1 sec  
 Auto Backup



Overwrite Yes  
 Rcd Type Real  
 Rcd Interval 1 sec  
 Auto Backup



**Password Input**

In running mode, press & to login password.  
 Press or to move cursor, press or to set value (Initial password:000000).  
 Press to enter next setting.

**Record Configuration**

Press or to move cursor to choose Record, press to enter Record Configuration, and press to exit record configuration.  
 Press to enter next setting.

**Overwrite**

Press or to move cursor, press or to choose overwrite or not. Yes: as long as the last file is recording to the full, the recorder will record from the first file. Newest file overwrites oldest file. No: Once record reaches to the full, it will stop recording automatically.  
 Press to enter next setting.

**Record Type**

Available record type: real time value, average value, minimum value and maximum value. If record interval is over 1s, paperless recorder will filter and calculate real time value based on calculation way, recording the calculated value.  
 Press to enter the next setting.  
 Press or to move cursor, press or to choose record type.

**Record Interval**

Available time (1s, 2s, 5s, 10s, 30s, 1min, 2min, 5min, 10min and 30 min).  
 Press or to move cursor, press or to choose record interval.  
 Press to enter next setting.



Overwrite Yes  
 Rcd Type Real  
 Rcd Interval 1 sec  
 Auto Backup



Trigger Event **Power on**  
 Clear History  
 Exit



Trigger Event Power on  
**Clear History**  
 Exit



Trigger Event Power on  
 Clear History  
**Exit**

**Auto Backup**

It will automatically backup one time at 0:0:0.  
 Press or to move cursor, press **EN** to choose, and means auto backup.  
 Press to enter next setting.

**Trigger Event**

Trigger event includes manual, alarm, relay, timer and power on. Alarm/relay: when alarm/relay alerts, data storage will be started and alarm/relay will stop, recording stops. Timer: record in certain setting time. Power up: when power up, new file will be created and data will be recorded. Press or to move cursor, or to choose trigger event, and **EN** to confirm. Press to enter next setting.

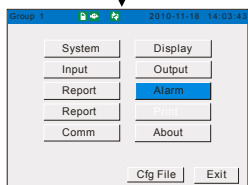
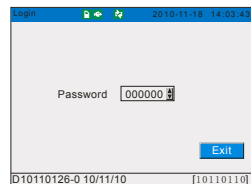
**Clear History**

Press **EN** and “purge the history record?” will pop up. Choose Yes to save and No to deny. Press **EN** to confirm the choice and all the data will be cleared. Press to enter next setting.

**Exit**

Press **EN** and “save the configuration?” will pop up. Choose Yes to save and No to deny. Press **EN** to confirm choice.

**7.6 Alarm Configuration Settings**



Channel **1**  
 Relay Delay 1 sec  
 Hysteresis 0.00  
 I Aim Time 1 sec



**Password Input**

In running mode, press & **EN** to login password.  
 Press or to move cursor, press or to set value (Initial password:000000).  
 Press **EN** to enter the next setting.

**Alarm Configuration**

Press or to move cursor to choose Alarm, press **EN** to enter alarm configuration, and press to exit alarm configuration.  
 Press to enter next setting.

**Alarm Channel**

Press or to move cursor, press or to choose alarm channel.  
 Press to enter next setting.

Channel 1  
 Relay Delay 1 sec  
 Hysteresis 0.00  
 I Aim Time 1 sec



Channel 1  
 Relay Delay 1 sec  
 Hysteresis 0.00  
 I Aim Time 1 sec



Channel 1  
 Relay Delay 1 sec  
 Hysteresis 0.00  
 I Aim Time 1 sec



D Alm Time 1sec  
 Alarm Type OFF  
 Value 0.00  
 Relay OFF



D Alm Time 1sec  
 Alarm Type OFF  
 Value 0.00  
 Relay OFF



D Alm Time 1sec  
 Alarm Type OFF  
 Value 0.00  
 Relay OFF



D Alm Time 1sec  
 Alarm Type OFF  
 Value 0.00  
 Relay OFF



Exit

Relay Delay (0~10s)

Press or to move cursor, press or to choose relay delay time.  
 Press to enter next setting.

Hysteresis (0~300)

Press or to move cursor, press or to choose hysteresis.  
 Hysteresis: hysteresis scope when H/L alarm cancels.  
 Press to enter next setting.

I Alm. Time (0~32s)

Press or to move cursor, press or to choose I alm. time.  
 I Alm.: Alarm will alert if differential value of engineering data in a certain time is higher than or equal to setting alarm value.  
 Press to enter next setting.

D Alm. Time (0~32s)

Press or to move cursor, press or to choose D alm. Time.  
 D Alm.: Alarm will alert if differential value of engineering data in a certain time is higher than or equal to setting alarm value.  
 Press to enter next setting.

Alarm Type

Available alarm type: H, L, I, D. Among them H: Alarm will alert when engineering data is higher than or equal to setting alarm value. After this, when engineering data is lower than or equal to (alarm value-hysteresis), alarm will cancel. L is on the contrary.  
 Press or to move cursor and or alarm type. Press to confirm.  
 Press to enter the next setting.

Alarm Value

Press or to move cursor, press to modify alarm value, and press to confirm.  
 Press to enter next setting.

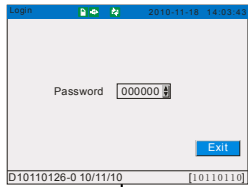
Relay

Press or to move cursor, press or to choose relay output point.  
 Press to confirm choice.

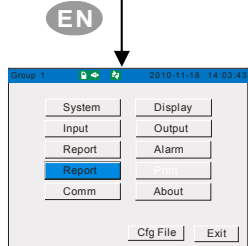
Exit

Press and "save the configuration?" will pop up. Choose Yes to save and No to deny.  
 Press to confirm.

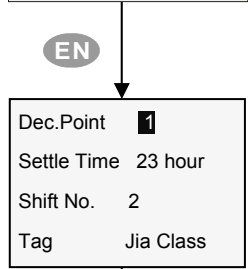
### 7.7 Report Configuration Settings



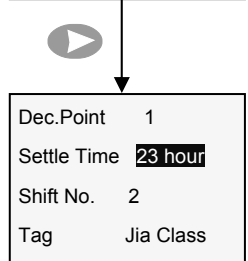
**Password Input**  
 In running mode, press & **EN** to login password.  
 Press or to move cursor, press or to set value (Initial password:000000).  
 Press **EN** to enter next setting.



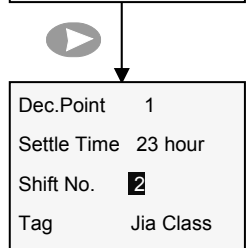
**Report Configuration**  
 Press or to move cursor to choose Report, press **EN** to enter report configuration, and press to exit.  
 Press to enter next setting.



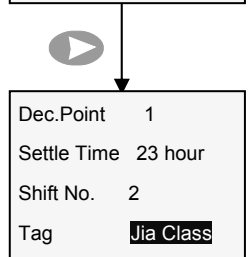
**Decimal Point (0~2)**  
 Press or to move cursor, press or to choose decimal point.  
 Press to enter next setting.



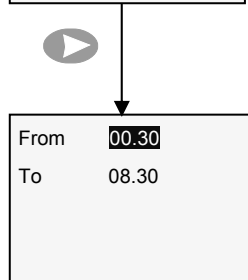
**Settle Time (00~23 Hr)**  
 Press or to move cursor, press or to choose settle time.  
 Settle time: The starting time of daily totalizing. If totalizer is on, paperless recorder will settle the totalizer one day before and start new totalizing.  
 Press to enter next setting.



**Shift No. (2~5)**  
 Press or to move cursor, press or to choose shift no..  
 Press to enter next setting.



**Tag**  
 Press or to move cursor, press **EN** to modify tag.  
 Press to enter next setting.



**Starting Time**  
 Press or to move cursor, press or to choose starting time.  
 Press to enter next setting.

From 00.30  
To 08.30

**End Time**  
End time varies with starting time.  
Press to enter next setting.



Channel **01**  
Totalizer OFF  
Initial 0.00  
Multiple 1.00

**Channel**  
Press or to move cursor and or to choose about-to-open totalizer channel. Press to enter next setting.



Channel 01  
Totalizer **OFF**  
Initial 0.00  
Multiple 1.00

**Totalizer**  
Press or to move cursor, press or to choose OFF or ON.  
If ON, totalizer will be displayed in left bottom corner of screen, see picture in page 5.  
Press to enter next setting.



Channel 01  
Totalizer OFF  
Initial **0.00**  
Multiple 1.00

**Initial**  
Press or to move cursor, press to enter Initial, and press to confirm.  
Press to enter next setting.



Channel 01  
Totalizer OFF  
Initial 0.00  
Multiple **1.00**

**Multiple**  
Press or to move cursor, press to enter Multiple, and press to confirm.  
Press to enter next setting.



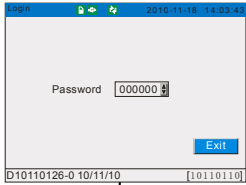
**Clear Total**  
Exit

**Clear Total**  
Press and "Clear Channel03 Accu Rpt?" will pop up, choose Yes to save and No to deny. Press to enter next setting.

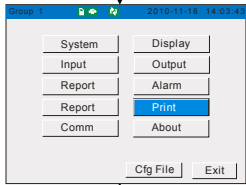


Clear Total  
**Exit**

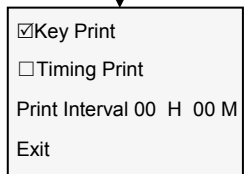
**Exit**  
Press and "save the configuration?" will pop up, choose Yes to save and No to deny.  
Press to confirm.



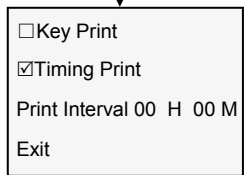
**Password Input**  
 In running mode, press & to login password.  
 Press or to move cursor, press or to set value (Initial password:000000).  
 Press to enter next setting.



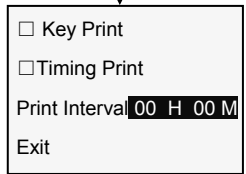
**Print Configuration**  
 Press or to move cursor to choose Print, press to enter Print Configuration, and press to exist.  
 Press to enter next setting.



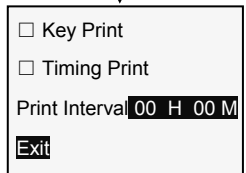
**Key Print**  
 Press or to move cursor, press or to choose comm.address.  
 Press to enter next setting.



**Timing Print**  
 Timing Print will automatically print at 0:0:0.  
 Press or to move cursor, press to choose and means timing print.  
 Press to enter next setting.

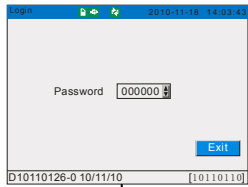


**Print Interval**  
 Press or to move cursor, press or to choose print interval.  
 Press to enter next setting.

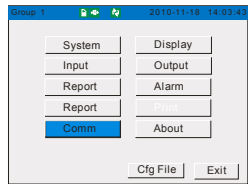


**Exit**  
 Press and "save the configuration?" will pop up, choose Yes to save and No to deny.  
 Press to confirm.

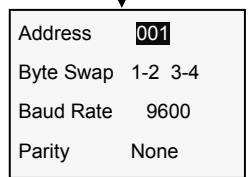
### 7.9 Communication Configuration Settings



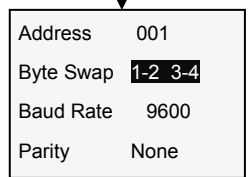
**Password Input**  
 In running mode, press & to login password.  
 Press or to move cursor, press or to set value (Initial password:000000).  
 Press to enter the next setting.



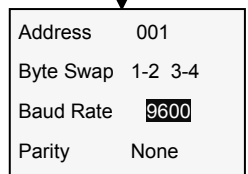
**Communication Configuration**  
 Press or to move cursor to choose Comm., press to enter Communication Configuration, and press to exit.  
 Press to enter next setting.



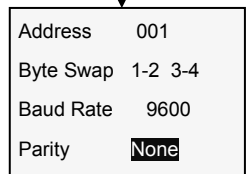
**Address (0~247)**  
 Press or to move cursor, press or to choose address.  
 Press to enter next setting.



**Byte Swap**  
 You can choose 1-2 3-4, 2-1 4-3, 3-4 1-2, 4-3 2-1. Default: 2-1 4-3.  
 Press or to move cursor, press or to choose byte swap, and press to confirm. Press to enter next setting.



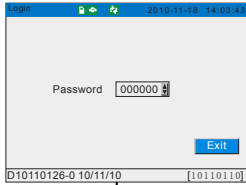
**Baud Rate**  
 Available: 1200 / 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200. Default: 115200.  
 Press or to move cursor, press or to choose baud rate, and press to confirm. Press to enter next setting.



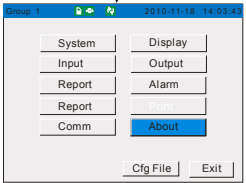
**Parity**  
 Available: None parity, odd parity, even parity. Default: None.  
 Press or to move cursor, press or to choose parity.  
 Press to enter next setting.



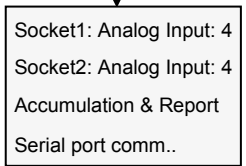
**Exit**  
 Press and "save the configuration?" will pop up. Choose Yes to save and No to deny.  
 Press to confirm.



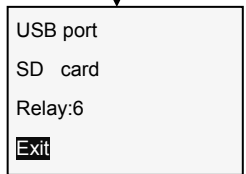
EN



EN



▶



**Password Input**

In running mode, press & to login password.  
 Press or to move cursor, press or to set value (Initial password:000000).  
 . Press to enter the next setting

**System Information**

Press or to move cursor to choose About, press to enter About, and press to exit.  
 Press to enter next setting.

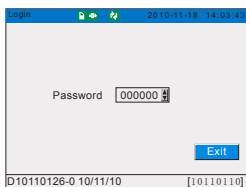
**System Information**

Blue Font (Socket 1: Analog Input 4) is meter innate AD info.; Black Font: (Socket2: Analog Input 4) is ex-AD info.If both disaccord, it means AD board has breakdown.

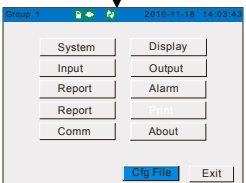
**System Information**

System Info. Is for checking the functions you purchased are the same as you want. You can not modify the system info.  
 Press or to move to Exit, and press to exit.

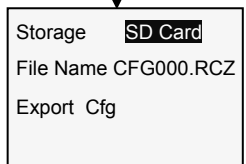
**7.11 Configuration File Settings**



EN



EN



▶

**Password Input**

In running mode, press & to login password.  
 Press or to move cursor, press or to set value (Initial password:000000).  
 Press to enter next setting.

**System Information**

Press or to move cursor to choose About, press to enter Report Configuration, and press to exit.  
 Press to enter next setting.

**Storage**

Press or to move cursor, press or to choose SD card or USB.  
 Press to enter next setting.

Storage SD Card  
 File Name CFG000.RCZ  
 Export Cfg



Storage SD Card  
 File Name CFG000.RCZ  
 Export Cfg



Storage SD Card  
 File Name CFG000.RCZ  
 Inport Cfg



Storage SD Card  
 File Name CFG000.RCZ  
 Inport Cfg



Storage SD Card  
 File Name CFG000.RCZ  
 Inport Cfg



Exit

**File Name**

Press ◀ or ▶ to move cursor, press EN to modify file name.  
 Press ▶ to enter next setting.

**Export Configuration**

Press ◀ or ▶ to choose Export Configuration, press EN to export configuration. In the bottom left corner, it will show the configuration is completed.  
 Press ▶ to enter next setting.

**Device**

Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose SD card or USB.  
 Press ▶ to enter the next setting.

**File Name**

Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose import file, and press EN to confirm.  
 Press ▶ to enter next setting.

**Import Configuration**

If you want to configure instruments with same model & same configuration, you can configure one set of them. Export the configuration data of this instrument and import data to other instruments. In this way, it will be convenient to do multichannel configuration.  
 Press ◀ or ▶ to move cursor to choose import configuration, press EN to confirm.

**Exit**

Press ◀ or ▶ to move cursor to choose Exit, and press EN to confirm.



### 8. How to Download Data From Paperless Recorder

1. Ensure FAT32 USB drive format. if not, please set it to FAT32. (Note: Max. USB capacity is 8GB and SD card 4GB)
2. Ensure enough USB drive storage capacity and should be more than recorder's internal storage memory (Not less than 4MB).

3. Plug USB drive into USB slot or SD card in front of recorder.

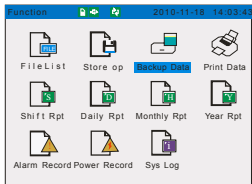
File Name: "Default Format: DAT+'S/N' (S/N is editable)

Report Name: "Default Format: RPT+'S/N' (S/N S/N is editable).

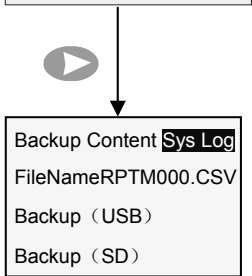
It will create a data file in USBdrive or SD card (e.g.: DAT001.RDZ).

The data will be automatically saved in the file. During data transfer, do not plug out USB drive or SD card, otherwise paperless recorder will not work normally. If abnormality occurs, plug out USB drive or SD card and follow step 1 & step 2 as above.

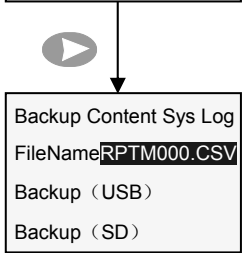
After USB drive plug-in, shift to "Backup Data" to check progress of exported data.



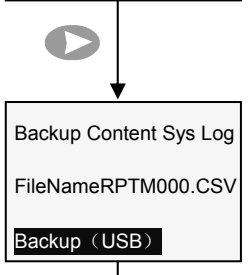
**Choose Backup**  
Press ◀ or ▶ to move cursor, choose Backup Data, and press **EN** to enter.



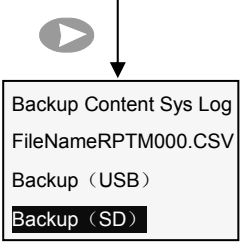
**Backup Content**  
Press ◀ or ▶ to move cursor, press ▲ or ▼ to choose Backup Content, and press **EN** to confirm.  
Press ▶ to enter next setting.



**File Name**  
Press ◀ or ▶ to move cursor, and press **EN** to modify file name.  
Press ▶ to enter next setting.



**Backup USB**  
Choose to use USB for data back-up.  
You can check backup progress below. If finished, "Backup Complete" will hint in left bottom screen.

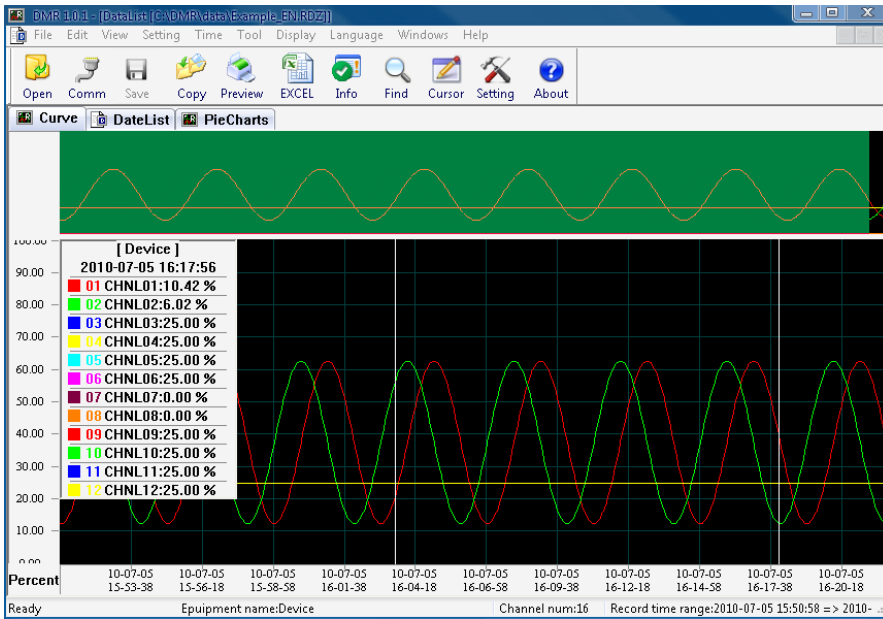


**Backup SD**  
Choose to use SD card for data back-up.  
You can check backup progress below. If finished, "Backup Complete" will hint in left bottom screen.

## 9. Application of Data Analysis Software

1. Insert USB drive into computer and if you need to permanently save data, please copy the data to hard drive of computer.
2. Run "v1.1.0.exe", click "Open historical data". Check the pictures:

### 9.1 Historical Graph



### 9.2 Circular Display Curve

