Programmable DC Electronic Load

3700 SERIES

user manual

CONTENTS

ElectronicLoad Software

CAUTION

Before switching on the DC Electronic load, the protective earth terminal of this instrument must be connected to the protective conductor of the AC line power cord. The AC line plug shall be inserted only in a socket outlet provided with a negated by the use of an extension cord (or power cable) without a protective grounding conductor.

SAFETY NOTES

The following general safety precautions must be observed during all phases of operation, service, and repair of this instrument. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the instrument. The Manufacturer assumes no liability for the customer's failure to comply with these requirements.

Ground the Instrument

This product is provided with a protective earth terminal. To minimize shock hazard, the instrument chassis and cabinet mush be connected to an electrical ground. The in strument must be connected to the AC Electronic Load mains through a three-conductor power cable, with the third wire firmly connected to an electrical ground (safety ground) at the power outlet. For instruments designed to be hard-wired to the AC power lines (supply mains), connect the protective earth terminal to a protective conductor before any other connection is made. Any interruption of the protective (grounding) conductor or discon nection of the protective earth terminal will cause a potential shock hazard that could result in personal injury. If the instrument is to be energized via an external autotransformer for voltage reduction, be certain that the autotransformer common ter minal is connected to the neutral (earthed pole) of the AC power lines (supply mains).

Keep Away From Live Circuits

Operating personnel must not remove instrument covers. Component replacement and internal adjustments must be made by qualified service personnel. Do not components with power cable connected. Under certain conditions, dangerous voltages may exist even with the power cable removed. To avoid injuries, always disconnect power, discharge circuits and remove external voltage sources before touching components. Do Not Substitute Parts or Modify Instrument Because of the danger of introduction additional hazards, do not install substitute parts or perform any unauthorized modification to the instrument. Return the instrument to a qualified dealer for service and repair to ensure that safety features are maintained.

Chapter 1 General Introduction

1.1 General Introduction

3700 Series Programmable DC Electronic Load is a kind of mini-size DC programmable electronic load with nice appearance. Also it is equipped with back-light LCD display, number keypad and rotary code switch which let it much easier to use. Voltage, current and power can all be displayed on the LCD or computer and tableau is distinct and clear. It can be operated at con stant current mode, constant resistance mode and constant power mode. It is an essential in-strument for scientific research, education, laboratory, test, service and so on institutions.

1.2 Specification

Type	3710A	3711A
Input quantity	1	1
Input voltage	DC 0~360V	DC 0~360V
Input current	0~30A	0~30A
Input power	0~150W	0~300W
Voltage resolution	0.000-3.999±(0.2%+3mV) 4.00-35.999±(0.2%+30mV) 36.0-360.0V±(0.3%+300mV)	
Current resolution	0.000-2.999±(0.2%+3mA) 3.00-30.00±(0.2%+30mA)	
Lowest Conductiue Resistance	<=0.08 Ω	
Ripple	<=10mVpp	
Communication	RS232/RS485 *	
Monitor software	Free software VC++ / VB / DELPHI / LABVIEW / COM parts	
Memory	10 points EEPROM	
Protective mode	Over voltage/over current/over power/over heat/polarity-reversing connection	
Power voltage	AC 110/220 available (60/50HZ)	
Weight	5.0Kg	
Accessories	Software, users manual, AC power cable, handlebars	
Purchase Option Parts	Communication cable for RS232 Communication cable for RS485 Mounting rack	

1.3 Features

1. LCD display with back light.

2. Number keypad.

3. High resolution at 1mV.

4. Protection for over current.

5. Protection for over power.

6. Adjustable constant resistance, constant current and constant power output.

7. Can be set by number key or rotary code switch.

8. Power shut-down memory function

9. Monitored by PC software.

10. Mini-size and light weight.

11. Can be used in parallel connection.

12. Programmable output.

1.4 Dimension and Structure
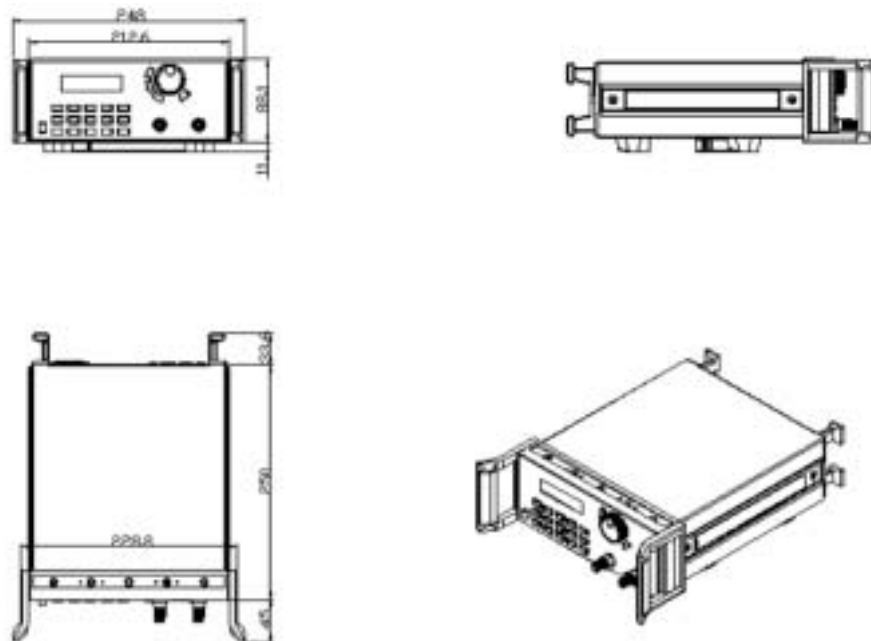
1.4.1 Dimension

Fig 1 Dimension of 3700 Series Programmable DC electronic load

1.4.2 Structure

1.4.2.1 Front view

Front panel is for users to operate, and there is one LCD display, one number keypad and one rotary keypad. Please see the following picture.
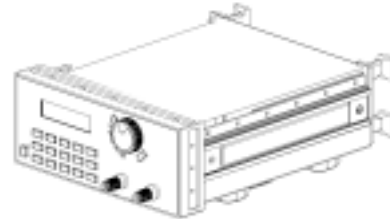
Fig2. Front view of 3700 Series DC electronic load
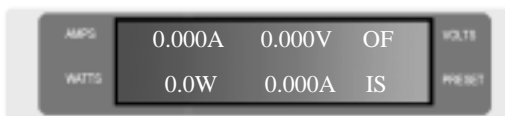
1. LCD display

Fig3. LCD Display of 3700 Series electronic load

The upper line:

The real current value,

voltage value and output status

(ON/OFF represent power source output status)

The lower line:

The output power rated value.

IS (PS, RS, SW) represents constant current,

constant power, constant resistance and program output.

2. Arrangement of the Keyboard

In common state, the keyboard will execute the prompting functions of the black words. And in special mode, it will change into the functions of the orange color words.

Fig4. Key board of 3700 Series DC electronic load

0~9: The number keys

Out ON/OFF: Switch ON/OFF the output

Store: Save the current setting value

R-set: Set up constant resistance value

START: Begin to program output

I-set: Set up constant current value

STOP: Stop to program output

P-set: Set up constant power value

Recall: Read the saved setting value

Menu: Menu function operation

▲ : The up moving key

▼ : The down moving key

V/A: Represent V at the voltage mode, represent A at the current mode.

mV/ mA : Represent mV at the voltage mode, and represent mA at the current mode.

3. Rotary code switch and function keys

◀ : The left moving key

▶ : The right moving key

ESC: Can be used to exit any working state

OK: Confirmation key

Rotary SW: The rotation key

Fig5. Rotary and function keys

1.4.2.2 Back view

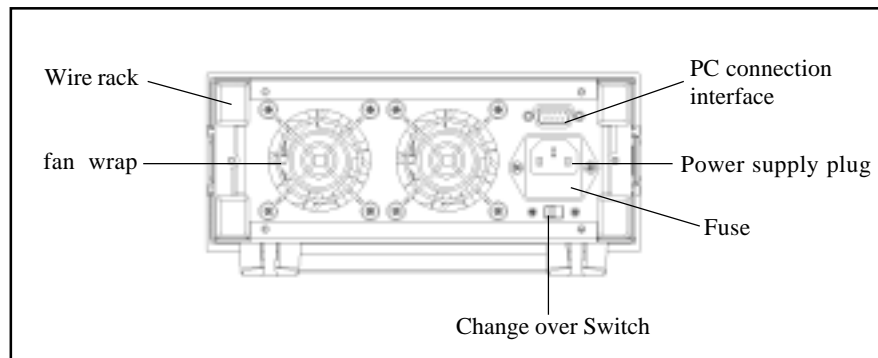Fig6. Back view

The fuse can be changed easily by using a small screw driver. Please use a fuse within the

range of 0.3-0.5A.

Chapter 2 Operation

2.1 General operation

1. Connect the electronic load with PC
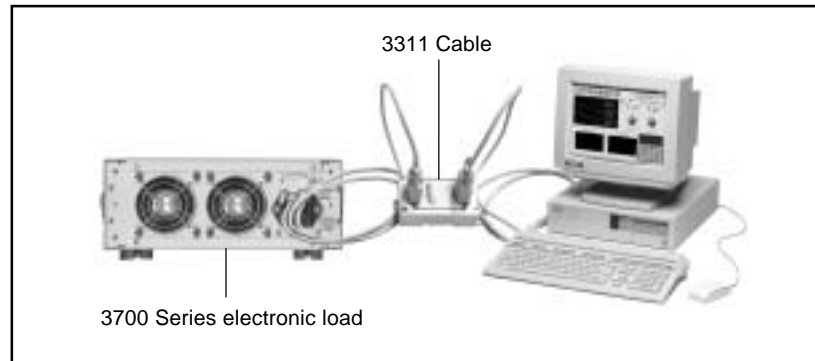
Fig 2.1 Connect the electronic load with PC

2.2 Function introduction

2.2.1. Main functions

1. Set up a constant current output

2. Set up a constant power output

4. Set up a constant resistance output

5. Store 10 sets of date which had been set up

6. Recall the stored data

7. Start/Stop

8. Switch ON/OFF the electronic load output

2.2.2 Sub-functions

1. Set up maximum current

2. Set up maximum power

3. Set up the programming

4. Set up the communication

5. Set up password

2.3 The operation of the function

We know that there are 8 main functions and 5 sub-functions of this electronic load, the following will descript how to operate all of the functions. Before any operation, please connect the power, and switch the power on, then the power indicator will be lighted.

2.3.1 I-set (set up a constant current)

Set up a constant DC current output is the first main function of programmable DC electronic load, 3710A electronic load provides two methods to set up the constant DC cur rent output by using the number keyboard and the rotary button. Please see the following operation procedure.

| Procedure	Operation details	LCD display
Step 1	Press " I-set "	SET CURR=0.00A NEW=
Step 2	Enter the password (Or jump to step 4 if the keyboard is unlocked)	ENTER PASWORD
Step 3	Press " OK " button (it will return to step 2 if your password is wrong for reentering)	ENTER PASWORD
Step 4	Press " I-set " to enter the original value which displayed on the LCD, or enter a new value by using the number key or rotate " Rotary SW " to adjust the voltage value and then press the " I-set " button for confirmation	SET CURR = 2.00A NEW=
It will exit the setting up voltage operation at any procedure by press ESC button		

For example, how to set up the output current at 3.12A

1. To set up by using number keyboard

Step1. Press " I-set " button,

Step2. Enter the password by using the number keyboard (if the keyboard is unlocked, please do step4),

Step3. Press " OK " button (if the password is wrong, please do step2 for reentering),

Step4. Press " 3 ", " **.** ", " 1 " and " 2 " button to enter the voltage value,

Step5. Press " I-set " button to confirm the voltage value.

2. To set up by using Rotary SW

(1) If the key board is unlocked by password, directly rotate the " Rotary SW " button, andvoltage will be continually changed from the previews value according the rotation. At the beginning, the cursor will be shown on the last number of the value which is indicated on the LCD, you can move the cursor to the first number, second number etc by using " ◀ " and" ▶ " buttons, and then rotate to change each num ber, and let it stay at 3.12 A. Please see the following figures. Then press " I-set " to confirm the value.

```
0.000A  0.000V  OF
0.0W    3.12A  IS
```
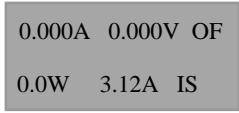
(2) If the keyboard is locked by password

Step1. Press " V-set " button,

Step2. Enter the password by using the number keyboard

Step3. Press Enter button (if the password is wrong, please do step2 for reentering),

Step4. Rotate the Rotary SW button to change the value, the operation is as the same as item (1)

Step5. Press " I-set " button to confirm the current value.

2.3.2 P-set (set up a constant power)

3700 Series electronic load can be set up for a constant power .

Constant power setup procedure is as following:

Procedure	Operation details	LCD display
Step 1	Press " P-set "	SET POWER = 30.0W NEW=
Step 2	Enter the password (Or jump to step 4 if the keyboard is unlocked)	ENTER PASWORD
Step 3	Press " OK " button (it will return to step 2 if your password is wrong for reentering)	ENTER PASWORD
Step 4	Press " P-set " to enter the original value which displayed on the LCD, or enter a new value by using the number key or rotate " Rotary SW " to adjust the power value and then press the " P-set " button for confirmation	SET POWER = 30.0W NEW= 72.2
It will exit the setting up current operation at any procedure by press ESC button		

2.3.3 R-set (set up a constant resistance)

3700 Series electronic load can be setup for a constant resistance.

Constant resistance setup procedure is as following:

Procedure	Operation details	LCD display
Step 1	Press " R-set "	SET RISIS = 200.0 ‖ Ω NEW=
Step 2	Enter the password (Or jump to step 4 if the keyboard is unlocked)	ENTER PASWORD

Step 3	Press " OK " button (it will return to step 2 if your password is wrong for reentering)	ENTER PASWORD
Step 4	Press " R-set " to enter the original value which displayed on the LCD, or enter a new value by using the number key or rotate " Rotary SW " to adjust the power value and then press the " R-set " button for confirmation	SET RISIS = 200.0 ‖ ฿ NEW= 50.0
It will exit the setting up current operation at any procedure by press ESC button		

2.3.4 Store data function

To users, this is a good function for ease using. If you want to use current output, resistance output and power output schedule as following in one hour, you can edit a program as the require ment, and then store it in the memory of 3700 Series DC electronic load as a number. When you need it, just recall it.

Time schedule	Constant current output
0~10 minute	5A
11~20 minute	10A
21~30 minute	15A
31-45 minute	10A
46~60 minute	5A

The store operation always be done after editing a program schedule for current output, resistance output and power output, the operation is as following:

Procedure	The operation Methods	LCD display
Step 1	Press " Store " button	****V ****W ****A **
Step 2	Enter the set value for store number(from 1 to 10) by using the number key or rotate the rotary button to change the set value number for store	STORE 1
Step 3	Press " Store " button to confirm the set value, if the number is out of the range from 1 to 10, it will retune to Step 2 for reenter	STORE *
It will exit the store operation at any procedure by press ESC button		

2.3.5 Recall data function

In the last paragraph, we know that we can store 10 programs of the electronic load in the memory. Also you can recall any one program from the stored data. It means that you needn't to set up again for the usually requirement, and it bring your much ease to use. The recall operation is as following.

Procedure	The operation Methods	LCD display
Step 1	Press " Recall " button	****V ****W ****A **
Step 2	Enter the number of the set data which you want to recall (from 1 to 10) by using the number key or rotate the rotary button to change the number you want recall	RECALL 1
Step 3	Press " Enter " button to confirm , if the number is out of the range from 1 to 10, it will retune to Step 2 for reenter	RECALL *
It will exit the Recall operation at any procedure by press ESC button		

2.3.6 Switch ON/OFF power output

The output of 3700 Series type electronic load should be off when it is powered, users can change the output status by using ON/OFF button. The button is a turn over button, when the original output is ON, press the button, then the output will be changed to OFF status, when the original output is OFF, press the button, then the output will be changed to ON status.

2.3.7 The function of the Menu

3700 Series electronic load provides a Menu operation for some special functions. The operation and function are as following.

Procedure	The operation Methods	LCD display
Step 1	Press " Menu " button	
Step 2	The LCD display the menu functions one by one, user can use the UP and DOWN button to change the selecting each function, Press " Enter " button to execute the selected function	MAX CURRENT SET MAX POWER SET PROGRAM SET COMMUNICATION SET ADRESS SET SAVE OPTION KEY LOCK EXIT
It will exit the Menu operation at any procedure by press ESC button		

The menu operation includes MAX CURRENT SET, MAX POWER SET, PROGRAM SET, COMMUNICATION SET, ADDRESS SET, SAVE OPTION, KEY LOCK Function. We will descript the details as following.
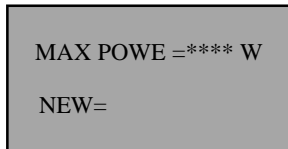
2.3.7.1 Set up the maximum current

When you select the MAX CURRENT SET function, the LCD will display :

MAX CURR= **** A

NEW=
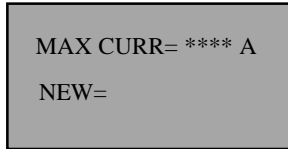
You can set the current value by using the number keyboard or rotating the ROTARY button. Then confirm the value by pressing " OK " button.
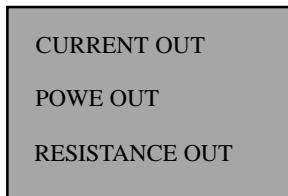
2.3.7.2 Set up the maximum power

When you select the MAX POWER SET function, the LCD will display as:

MAX POWE =**** W

NEW=

You can set the power value by using the number keyboard or rotating the ROTARY button. Then confirm the value by pressing " OK " button..

2.3.7.3 Program Set

When you select the PROGRAM SET, the LCD will display as:

CURRENT OUT

POWE OUT

RESISTANCE OUT

Users can set constant current, constant power and constant resistance format by using the up and down key or the rotary button, and then confirm it by pressing " OK " button. The detail procedure of setting up is as following.

1. Set a program to provide a constant Current Output

1) Select CURRENT OUT, press OK to confirm
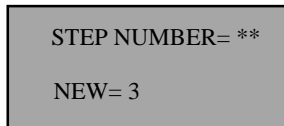
2) The LCD will display

STEP NUMBER= **

NEW= 3

3) Enter the step number, if you wan to set 3 steps, then enter 3, then press OK to confirm.

(Please pay attention to the range of this value is from 1 to 11. Maximum is 11 steps).

4) The LCD will display

```
STEP 1 SET = 0.00

NEW= 1
```

5) You need to enter a current value for the first step, (Please pay attention to the range of this value of this type DC Load), such as 1 A, so you should enter 1, then press OK to confirm, and then the LCD will display

```
STEP 1 TIM= 1S

NEW= 2
```

6) At this time, you need to enter a time value, (Please pay attention to the range of this time value is from 1 to 7200 seconds, maximum is 7200 seconds), such as 2 seconds, so you should enter 2, then press OK to confirm, and then LCD will display

```
STEP 2 SET= 0.00

NEW= 2
```

7) At this time, you need to enter a current for the second step, (Please pay attention to the range of this current value), such as 2A, so you should enter 2, then press OK to confirm, and then LCD will display

```
STEP 2 TIM= 1S

NEW= 5
```

8) At this time, you need to enter a time value for the second step (the range of this time value is from 1 to 7200 seconds), such as 5 seconds, so you should enter 5, then press OK to confirm, and the LCD will display

```
STEP 3= 0.00

NEW= 3
```

9) At this time, you need to enter a current for third step, such as 3A, so you should enter 3, then press OK to confirm, and then LCD will display

```
STEP 3 TIM= 1S

NEW= 10
```

10) At this time, you need to enter a time value for the third step, such as 10 seconds, so you should enter 10, then press OK to confirm, and the LCD will display

```
ONE TIME

REPEAT
```
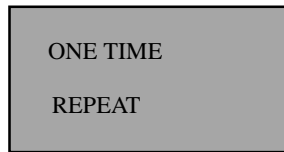
11) At this time, if you select ONE TIME, and press OK to confirm, then the constant current will be provided by this load at the following schedule

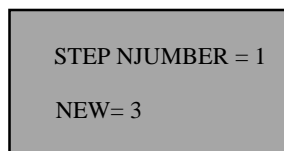Step 1   1A for 2 seconds

Step 2   2A for 5 seconds

Step 3   3A for 10 seconds

If you select REPEAT, and press OK to confirm, then the constant currents schedule as the above will be provided repeatedly.

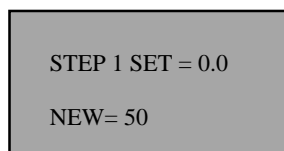**2. Set a program to provide a constant Power Output**

1) Select POWER OUT, press OK to confirm

2) The LCD will display

```
STEP NJUMBER = 1

NEW= 3
```

3) Enter the step number, if you wan to set 3 steps, then enter 3, then press OK to confirm. (Please pay attention to the range of this value is from 1 to 11. Maximum is 11 steps)

4) The LCD will display

```
STEP 1 SET = 0.0

NEW= 50
```

5) You need to enter a power value for the first step, (Please pay attention to the range of this power value), such as 50W, so you should enter 50, then press OK to confirm, and then the LCD will display

```
STEP 1 TIME = 1S

NEW=30
```

6) At this time, you need to enter a time value, (Please pay attention to the range of this time value is from 1 to 7200 seconds, maximum is 7200 seconds), such as 30 seconds, so you should enter 30, then press OK to confirm, and then LCD will display

```
STEP 2 SET = 0.0

NEW=100
```

7) At this time, you need to enter a power value for the second step, (Pay attention to the range of this power value), such as 100W, so you should enter 100, then press OK to confirm, and then LCD will display

```
STEP TIME = 1S

NEW= 60
```

8) At this time, you need to enter a time value for the second step (the range of this time value is from 1 to 7200 seconds), such as 60 seconds, so you should enter 60, then press OK to confirm, and the LCD will display

```
STEP 3 SET = 0.0

NEW= 150
```

9) At this time, you need to enter a power value for third step, such as 150W, so you should enter 150, then press OK to confirm, and then LCD will display

```
STEP TIME = 1S

NEW= 120
```

10) At this time, you need to enter a time value for the third step, such as 120 seconds, so you should enter 120, then press OK to confirm, and the LCD will display

```
ONE TIME

REPEAT
```

11) At this time, if you select ONE TIME, and press OK to confirm, then the constant power will be provided by this load at the following schedule

Step 1   50W for 30 seconds

Step 2   100W for 60 seconds

Step 3   150W for 120 seconds

If you select REPEAT, and press OK to confirm, then the constant currents schedule as the above will be provided repeatedly.

3) Set a program to provide a constant Resistance Output

1) Select RESISTANCE OUT, press OK to confirm

2) The LCD will display

```
STEP NUMBER = 1

NEW=   3
```

3) Enter the step number, if you want to set 3 steps, then enter 3, then press OK to confirm. (Please pay attention to the range of this value is from 1 to 11. Maximum is 11 steps).

4) The LCD will display

```
STEP 1 SET = 500.0

NEW= 100
```

5) You need to enter a resistance value for the first step, (Please pay attention to the range of this resistance value), such as 100 $_\Omega$ so you should enter 100, then press OK to confirm, and then the LCD will display

```
STEP 1 TIM= ****

NEW=30
```

6) At this time, you need to enter a time value, (Please pay attention to the range of this time value is from 1 to 7200 seconds, maximum is 7200 seconds), such as 30 seconds, so you should enter 30, then press OK to confirm, and then LCD will display

```
STEP 2 SET = 500.0

 NEW= 200
```

7) At this time, you need to enter a resistance value for the second step, (Pay attention the range of this value), such as 200∥ ₐ so you should enter 200, then press OK to confirm, and then LCD will display

```
STEP 2 TIME = 1S

 NEW= 60
```

8) At this time, you need to enter a time value for the second step (the range of this time value is from 1 to 7200 seconds), such as 60 seconds, so you should enter 60, then press OK to confirm, and the LCD will display

```
STEP 3 SET = 500.0

 NEW= 300
```

9) At this time, you need to enter a resistance value for third step, such as 300∥ ₐ so you should enter 300, then press OK to confirm, and then LCD will display

```
STEP 3 TIME = 1S

 NEW= 120
```

10) At this time, you need to enter a time value for the third step, such as 120 seconds, so you should enter 120, then press OK to confirm, and the LCD will display

```
ONE TIME

 REPEAT
```

11) At this time, if you select ONE TIME, and press OK to confirm, then the constant power will be provided by this load at the following schedule

Step 1   100 ‖ ᴮ for 30 seconds

Step 2   200 ‖ ᴮ for 60 seconds

Step 3   300 ‖ ᴮ for 120 seconds

If you select REPEAT, and press OK to confirm, then the constant currents schedule as the above will be provided repeatedly.

2.3.7.4 Set up the communication

This function is for monitoring the output data of the electronic load by using a computer.

When you select COMMUNICATION SET function, the LCD will display as:

```
BUAD RATE=4800
BUAD RATE=9600
BUAD RATE=19200
BUAD RATE=38400
```
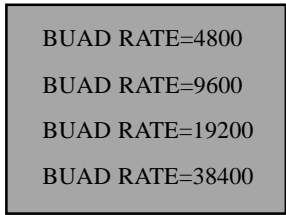
Users can change the communication setup by using UP and DOWN keys or rotating the ROTARY button, and confirm the value by pressing " OK " button.

BUAD RATE 4800 represent BUAD rate=4800bps

BUAD RATE 9600 represent BUAD rate=9600bps

BUAD RATE 19200 represent BUAD rate=19200bps

BUAD RATE 38400 represent BUAD rate=38400bps

2.3.7.5 Set up communication address (0~254)

This communication address function is for monitoring multi-electronic load system. In the system, one computer can monitor 255 DC electronic load at the most by the connecting RS232 and 485 bus. So we should give each electronic load an address.

When you select ADDRESS SET function, the LCD will display as:

```
SET ADDRESS * * *
NEW=
```
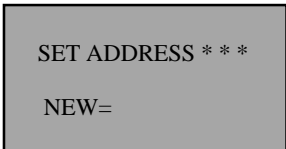
Users can change the communication address value by using UP and DOWN keys or rotating the ROTARY button, and confirm the value by pressing " Enter " button. The range of the address value is from 0 to 254.

2.3.7.6 Set up locking key board

After you locked the keyboard, you must enter the correct password to unlock it, then you can use the number keys and the ROTARY button. This function is for the safety of the using of electronic load.

When you select the KEY LOCK function, the LCD will display as:
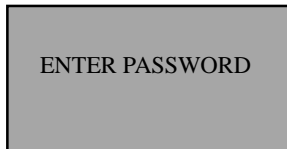
ENTER PASSWORD

Users can enter 4 numbers or letters as the password by pressing the number button or by using and button or ROTARY button to change the number or ASCII number which will be your password, and confirm the password by pressing " Enter " button.

2.3.7.7 Set up SAVE OPTION

This function is for saving the last set up of the current, power and resistance. It will save much time of users when the users will need the same setup value. It will display the same current, power and resistance value when the electronic load is powered on for every time.

When you select the SAVE OPTION function, the LCD will display as:

SAVE I,P,R

DON T SAVE VOLT ***
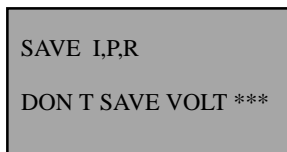
Users can change the selection by using UP and DOWN keys or rotating the ROTARY button, and confirm the selection by pressing " OK " button. To select SAVE I, P,R means to save the last set up of current, power and resis tance. To select DON T SAVE *** means don't save the last set up voltage value.

2.3.7.8 EXIT function

When the EXIT function is selected, you will exit the Menu operation.

ElectronicLoad **Software**

Electronic Load is mainly to test the equipment, to know how much voltage or current it can bear, to reduce the accidents in which the machine may be burnt in case of not knowing the voltage and current of it and to ensure the use of some expensive machines.

Chapter 1   System Installation

1.1 Installation

1.1.1 Put the CD-ROM into the CDROM driver and select to setup ElectronicLoad Software, The following initializing figure as in Fig. 1-1 will be displayed.

Fig.1-1 The Initialization Interface of the Installation

1.1.2 The system entering the following interface, press " NEXT " to continue

Fig.1-2 Installation Interface 2

1.1.3 The system entering this interface, if you don't want to continue to install, you can click " NO" to exit the installation. And if you want to continue, click " Yes " button .

Fig.1-3 Installation Interface 3

1.1.4 The system entering this interface, enter some words or numbers idly in the " Serial " frame and click " NEXT "

Fig.1-4 Installation Interface 4

1.1.5 The system entering this interface, click " Browse " to select the installation folder. And the defaulted folder is " C:\Program Files\Array\Electronic ".
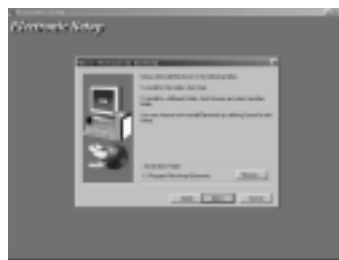

Fig.1-5 Installation Interface 5 Set Installation Folder

1.1.6 This interface is set for select the setup type. Generally select and click " Typical " and then select " NEXT ".

Fig.1-6 Installation Interface 6 Set Type

1.1.7 This interface is to modify the file name and the default file name is " ELECT " Generally this step will not be used and it will be OK to directly click " NEXT ".

Fig.1-7 Installation Interface 7 Modify File Name

1.1.8 The system entering this interface, please wait patiently for the files to be copied to your hard disk.

Fig.1-8 Installation Interface 8 Copy Files

After the competition of the copy, the system installation of the Electronic Load is finished.

1.2 Start

1.2.1 As in Fig.1-9, select the file folder " Start | Program | Array " and then select and click the menu item " Electronic ". And it will be OK.

Fig.1-9 Start the System

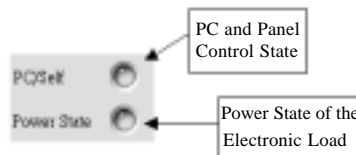1.2.2 The start diagram is as follows:

Fig.1-10 System Start Diagram

1.2.3 Enter the Main Interface

Fig.1-11 Main Interface of Electronic Load

These two lights may be on at the same time. And it is possible that one of them is on or neither of them is on. That the PC/Self light is on means the PC is in the charge of the Electronic Load. Conversely it is in charge of its panel. That the Power State light is on means the power of the Electronic Load is on. Conversely it is off. (Before exiting the run program, the control of the Electronic Load must be reurned to the machine itself and it must confirmed that the power is off.)

The functions of the seven buttons in the up are as follows:

" Run " : Run the Program

" Pause " : Stop Running

" COM Setting " : COM Port Set

" Program Setting " : Program Set

" Send Data " : Send Data

" Stop Send " : Stop Sending Data

" Close " : Stop Communication

1.3 Uninstall the System

It will be OK to select " Uninstall Elect " from the system start menu. Remember to close the system before uninstalling; otherwise it will be no way to run the command.

Chapter 2 Functions Introduction

2.1 COM Port Set Interface: (Notes: Do remember to be sure that the control of the Load is in the PC when setting.)
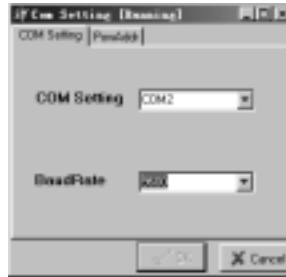

Fig.2-1 COM Port Setting Interface

The system entering this interface, please confirm the COM and the Baud Rate. And at this time the title of the interface change into " COM Setting [Running] " and the communication is normal. Then the Communication Address can be set. Before setting the Communication Address, be sure that the PC is in control of the Load. Thus the new address can be effective; otherwise it will reduce the stop of the communication.

The two switches in the middle of the top side are used to adjust the control of the lower machine (the Load) and the power. After running, turn the two switches to the top and then all the set can be effective.

Fig.2-2 the Control of the Lower Machine (Load) and the PC

OFF: Turn off the Power Supply

ON: Turn On the Power Supply

SELF: Control by the Panel

PC: The Control of the PC

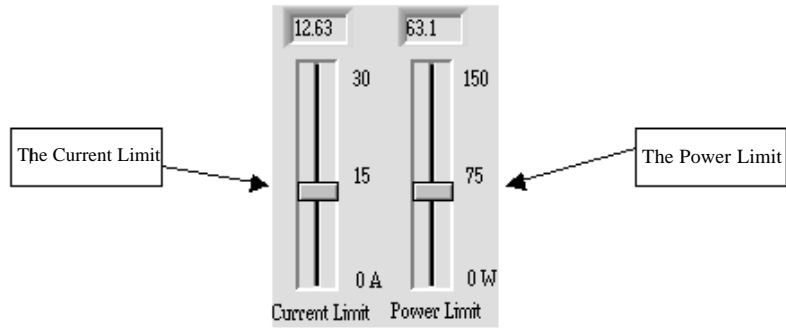**2.2 The Current Limit and the Power Limit Set:**

Fig.2-3 Limit Setup

Only after the value is set, can the current and power be set. Otherwise there will be an alarming dialogue frame.

2.3 The Current Value, the Power Value and the Resistance Value Set:

Fig.2-4 (1) Setup the Current Value, the Power Value and the Resistance Value Using Rotary

When a parameter need to be set, just put the mouse on the red point of the relative rotary and rotate. But the rotary just set the value roughly. And if the values need to be set accuracy, the keyboard needs to be used.

Fig.3-4(2) Setup the Current, Power and Resistance Using the Keyboard

If a parameter needs to be set, click the Set button relative to the parameter, setup and then click the Enter key to send.

Explanation to the buttons of the keyboard:

A set: Click it before the current is set and then setup (0~30A).

P set: Click it before the power is set and then setup (0~150W).

R set: Click it before the resistance is set and then setup (0~150¦¸).

A, P, R represents the max value of each parameter (30A, 150W, 150¦¸).

2.4 Programming Setting Interface:

Click the button on the top in the main interface, then the following diagram will be displayed:
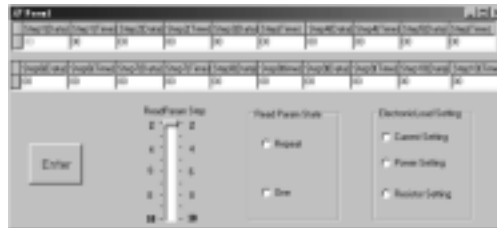

Fig.2-5 Program Setting Interface

On the above, the date can only be set once by Rotary and keyboard. Otherwise, ten sets of data can be set by this interface.

After set the item " ElectronicLoadSetting " and make clear to set the current, the power or the resistance, the other can be set. (It is not needed to set 10 steps)

ReadParam Step is to set the step number for you to read the set parameter. The value cannot be larger than the data step number you set.

ReadParam State is to set the reading mode of the data, repeatedly or once.

After the competition of the setup, click the confirming button (Enter) to exit this interface. (Do not skip this step) .Do remember that the data don't send to the power supply at this time. Return to the main interface, and can the set data be sent.


The button on the left is to send and read data; and the button on the right is to stop reading data.

2.5 The Explanation to the Receiving Zone:

Input Low ⬤	The red light means the output of is negative. Conversely it is normal.
Over Hot ⬤	The red light means being over-hot. Conversely it is normal.
Over Voltage ⬤	The red light means being over-voltage. Conversely it is normal.
Over Power ⬤	The red light means being over-power. Conversely it is normal.
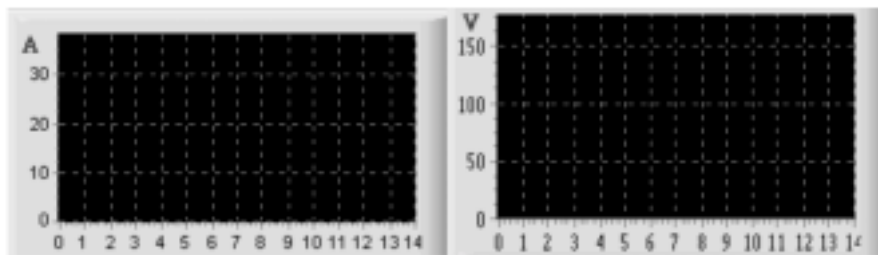
Dynamically Running Diagram

Dragging the mouse on the top can scan the data.

Chapter 3 Maintenance and Service

During the process of communication, there may be the pause situation of the communication for the maladjustments. And at this time, the " COM-SETTING " interface may be used:

Confirm the " COM Port " and " Baud Rate " of the previous page, and then adjust the value of " OldAddr " When the " COM Setting [Running] " interface is displayed, this means that the last communication has used this address. (This is only being used when the set address has been forgotten.) Then set the " NewAddr " to this new address and click " Write " button to send. (At this time, change the data of the " OldAddr " otherwise the " Write " will be no effective.)

In the process of adjustment, COM Port Setting Interface is still being the " Com Setting " This means the failure of communication. Then the user can adjust the old address into zero and try it.

If the system runs normal, when it is powered on. The communication stops suddenly while the user is adjusting the Limit, the current, the power or the resistance. At this time, the user should open the COM Port Setting Interface, turn the OldAdd to zero and do not save it. Then you return to the main interface and click the running button and maybe the communication will be good.

Be sure that before changing the address, the PC must be in charge of the lower machine (the Load).

While the COM Port Setting Interface being open, the old address is the address of the last communication. Remembering it may be helpful.