Power Sequence Controller



Owner's Manual

IMPORTANT SAFETY INFORMATION

WARNING FOR YOUR PROTECTION READ THE FOLLOWING:

KEEP THESE INSTRUCTIONS

HEED ALL WARNINGS

FOLLOW ALL INSTRUCTIONS

The apparatus shall not be exposed to dripping or splashing liquid and no object filled with liquid, such as vases, shall be placed on the apparatus.

CLEAN ONLY WITH A DRY CLOTH.

DO NOT BLOCK ANY OF THE VENTILATION OPENINGS. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

DO NOT INSTALL NEAR ANY HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES, OR OTHER APPARATUS (INCLUDING AMPLIFIERS) THAT PRODUCE HEAT.

ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.

UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Use only with the cart stand, tripod bracket, or table specified by the manufacture, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

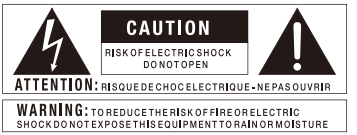
POWER ON/OFF SWITCH: If the equipment has a Power switch, the Power switch used in this piece of equipment DOES NOT break the connection from the mains.

MAINS DISCONNECT: The plug shall remain readily operable. For rack-mount or installation where plug is not accessible, an all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated into the electrical installation of the rack or building.

FOR UNITS EQUIPPED WITH EXTERNALLY ACCESSIBLE FUSE RECEPTACLE: Replace fuse with same type and rating only.

MULTIPLE-INPUT VOLTAGE: This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. Connect this equipment only to the power source indicated on the equipment rear panel. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel or equivalent.

If connected to 240V supply, a suitable CSA/UL certified power cord shall be used for this supply.



The symbols shown above are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash with arrowpoint in an equilateral triangle means that there are dangerous voltages present within the unit. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the owner's manual.

These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

IMPORTANT SAFETY INFORMATION

SAFETY INSTRUCTIONS

NOTICE FOR CUSTOMERS IF YOUR UNIT IS EQUIPPED WITH A POWER CORD.

WARNING: THIS APPLIANCE SHALL BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARTHING CONNECTION.

The cores in the mains lead are coloured in accordance with the following code:

GREEN and YELLOW - Earth BLUE - Neutral BROWN - Live

As colours of the cores in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The core which is coloured green and yellow must be connected to the terminal in the plug marked with the letter E, or with the earth symbol, or coloured green, or green and yellow.
- The core which is coloured blue must be connected to the terminal marked N or coloured black.
- The core which is coloured brown must be connected to the terminal marked L or coloured red.

This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. If the attachment plug needs to be changed, refer servicing to qualified service personnel who should refer to the table below. The green/yellow wire shall be connected directly to the units chassis.

CONDUCTOR		WIRE COLOR	
		Normal	Alt
L	LIVE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	EARTH GND	GREEN/ YEL	GREEN

WARNING

This device is equipped with high voltage elements. Do not open the shell if not necessary. Pay attention to the risk of electric shock when checking or modifying the device.
The responsibility of decline of quality or burn down of the device caused by owner's modifying or disoperation is not included in the warranty.
If the ground is defeated, certain fault conditions in the unit or in the system to which it is connected can result in full line voltage between chassis and earth ground. Severe injury or death can then result if the chassis and earth ground are touched simultane-ously.

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Section 1 – Introduction

1.1 Brief Introduction

Congratulations on your purchase of this Time Sequence Controller, it is a powerful and intelligent time sequence controller, designed specifically for pro-audio system. The device can boot up and shut down different kinds of devices by sequence, avoiding system damage causing by current surge of error operation and switchgear moment. It's very easy and convenient to use the multifunctional device with TFT touch screen shows the operating states.

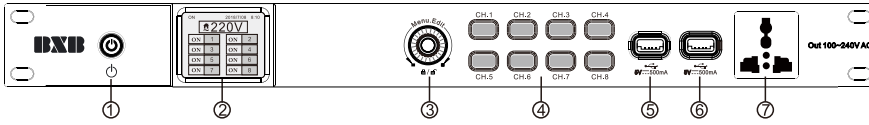
Thank you for your trust and choosing on it, hope you enjoy on using the device.

1.2 Product Features

- Equipped with a 2.2 TFT-LCD inches touch screen, shows the current voltage, date, time, state of each channel (on/off).
- 8 channels output, delay time of booting up and shutting down of each channel can be set (range: 1~999sec).
- Users can boot up / shut down each channel independently.
- A clock chip is build-in for users to set the date and time to boot up / shut down each channel.
- Users can set the value of under-voltage / over-voltage protection.
- Users can operate the device by cascading, external controlling or central controlling via RS232 and RS485 ports.
- Total rated output current: 36A. Individual channel rated output current: 10A.

Section 2 Quick Start

2.1 Front Panel



1. SEQUENCE

Switch for display screen: long press 5 seconds to turn on/off screen and boot up/shut down all enable channels.

Short press for booting up/shutting down channels intelligently when display screen is on.

2. LCD Touch Screen

The screen shows the working state and can set the functions.

3. MENU EDIT

Functions editing rotating knob, users can press it to confirm.

4. Channels on/off

Quickly turn on/off the channel, green lighting when the channel is enabled, the light is off when the channel is off.

5. USB LAMP

It provides DC 5V 500mA.

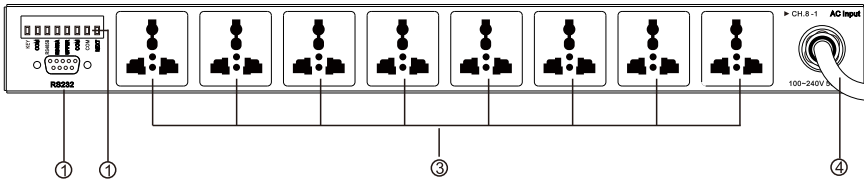
6. USB LAMP

It provides DC 5V 500mA.

7. OUT 100-240V AC

Auxiliary output channel, a direct channel, is out of intelligent control.

2.2 Rear Panel



1. RS232

Central control interface, it is used to connect PC.

2. (1,2) External intelligent switch ports, (3,4) RS485, (5~8) cascading ports (please check cascading diagram on PAGE 7).

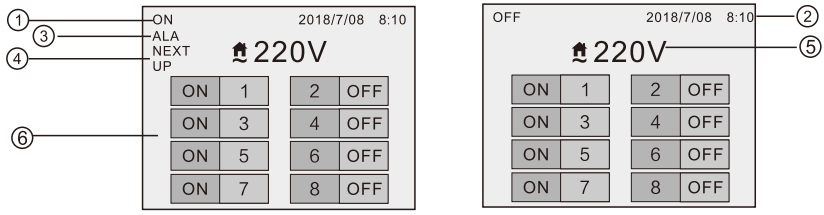
3. CH1~8

Universal power sockets for channel 1~8.

4. AC INPUT 100~240V 50/60Hz

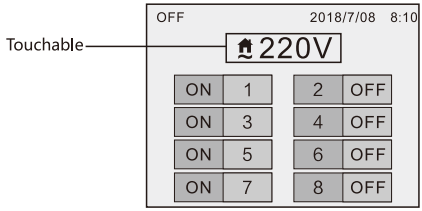
Power cable, connect to power source.

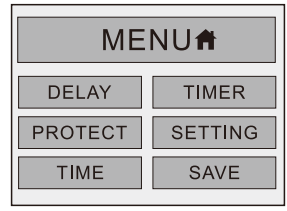
2.3 Main Interface.

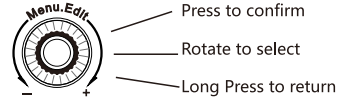


1. ON/OFF
   Working state.
2. Date and Time
3. Symbol of Timer Opened
4. Symbol of cascading connection
5. MENU, enter by touching :
   Real-Time Voltage. It is white in normal condition, it turns to red when over-voltage or low-voltage protection.
6. The condition of CH1~8. The channel is on-state when it is green; otherwise, it turns to red.

2.4 Functions and operation.

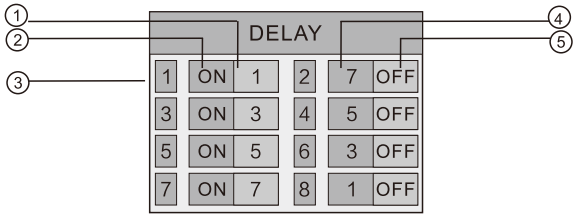


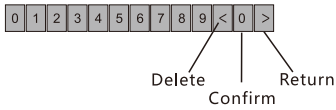


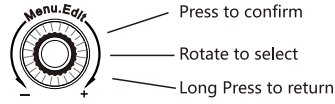


1.Users can adjust parameters by touch screen or Menu.Edit knob.
2.Entering menu by pressing Menu.Edit knob or the symbol of Real-Time Voltage.
3.Adjusting parameters by rotating Menu.Edit knob.
4.Returning to previous menu by long pressing Menu.Edit knob or touching the symbol of menu.
5.Parameters can only be used next time when it is saved after being adjusted (please check SAVE setting on PAGE 6).

DELAY Setting



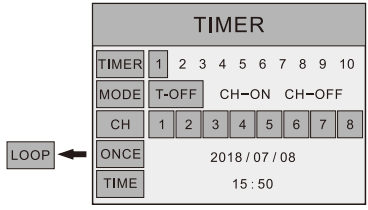


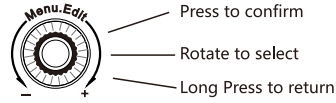


In DELAY Setting menu, users can set delay time of booting up or shutting down of each channel, by touching screen or rotating Menu.Edit knob. Range: 0-999S.

1. Boot up delay time;
2. Delay time On-state;
3. Switch for CH1~8, the specific channel will be out of intelligent controlling of booting up or shutting down.
4. Shut down delay time;
5. Delay time shut.

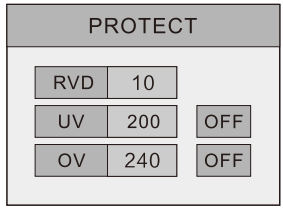
TIMER Setting

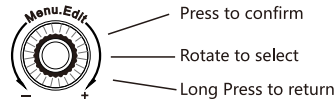




In the TIMER Setting Menu, users can set 1-10 Timers to boot up/ shut down.
By touching screen or rotating Menu.Edit knob to set parameters. ALA symbol will show on main interface when the timer is set.

PROTECT Setting





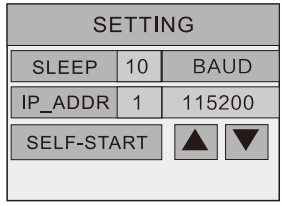
RVD: Voltage Return Different Value. The device will be back to work after protected in following situation:

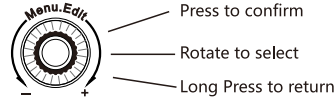
1. The protection is caused by lower voltage, and then the voltage goes up to between UV+RVD to OV.
2. The protection is caused by over voltage, and then the voltage goes down to between UV to OV-RVD.

UV: Under Voltage. The protection will be on state when the voltage is lower than the UV value.

OV: Over Voltage. The protection will be on state when the voltage is higher than the OV value.

SETTING Setting





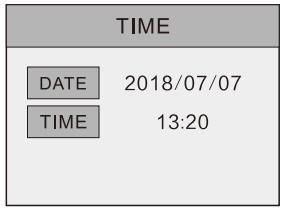
SLEEP: Screen off function. OFF or 1-30 minutes adjustable for screen off when on operation on device, it can be wake up by touching screen , pressing or rotating knob.

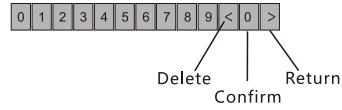
IP_ADDR: IP address of the device.

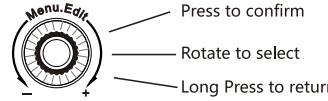
BAUD: 4800BPS/9600BPS/14400BPS/19200BPS/38400BPS/56000BPS/57600BPS/11500BPS Select the corresponding Baud rate for connecting by the RS232 port.

SELF-START: SELF-START function, the device can boot up automatically by selecting SELF-START ON when connecting power.

TIME Setting

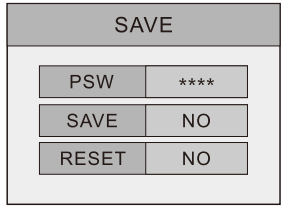


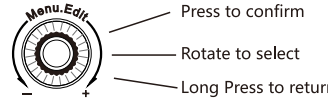




Users can set date and time of the device.

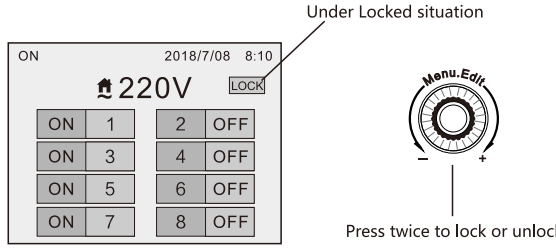
SAVE Setting



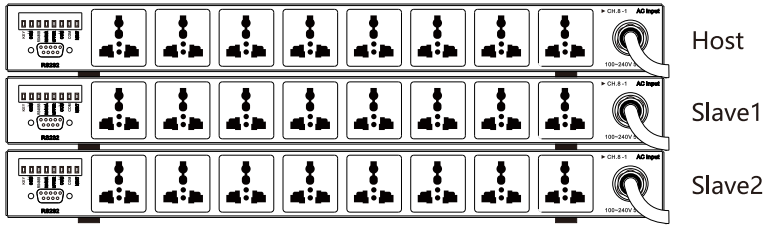


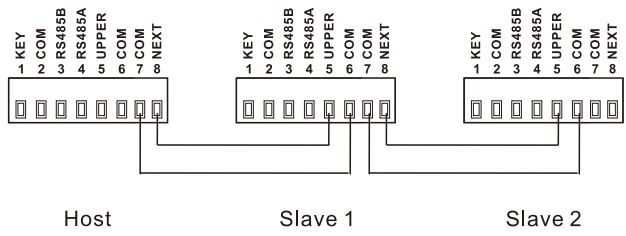
PSW: Password. Users need to type in password, then set a new password.
SAVE: Parameters need to be saved after adjusting, so that the setting can be used next time the device boots up.
RESTORE: Restore the factory setting.

LOCK Setting



2.5 Multiple Devices Cascading Diagram

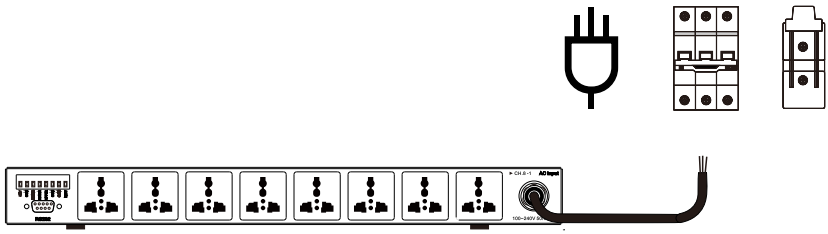




Users can cascade devices as above diagram. The first device will be default as host under the cascading system, the sequence of slave devices will be on-state when the host's is on, and the please be noted that the slave devices should be shut down the boot up timer.

2.6 Power Cable

Power cable of device IS NOT EQUIPPED WITH PLUG. Users can choose the plug by themselves when needed, or connect the power cable directly to air switch or knife switch.



Section 3 Appendix

3.1 Technical Specifications

Supply voltage: AC 100V~240V, 50~60Hz
Individual channel rated output current: 10A
Total rated output current: 36A
Interval time of each sequence step: 1~999s
USB power supply: DC 5V/ 500mA
Power output sockets: 8 controllable outputs, 1 auxiliary output
Product dimensions (width x length x high): 480 x 225 x 47 mm

3.2 Packing List

1 unit of intelligent time sequence controller
1 owner's manual