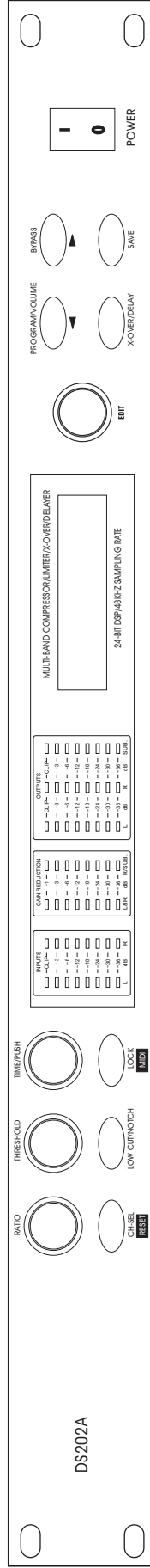


# 24-BIT MULTI-BAND COMPRESSOR/LIMITER/X-OVER/DELAYER MODEL DS202A



## INSTRUCTION MANUAL

## ATTENTION!

All products are carefully packed and designed to protect the units from rough handling Before shipping out from the factory. Examine your good upon receiving, to ensure no damage during transportation. Any damage claim should be informed & notified to relative dealer within 14 days of good received. The dealer will not except failing of such. The consignee must make all shipping claims.

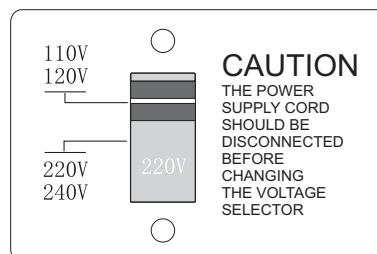
The DS202A fits into a standard 19" rack unit of space (1 3/4"). Allow at least an additional 4" depth for the connectors on the back panel. Be sure that there is enough air space around the unit for cooling and ventilation. DO NOT place the DS202A on high temperature devices like power amplifiers to avoid overheating.

Using a main cable and a standard IEC receptacle makes the main connection of the DS202A. It meets all of the international safety certification requirements.

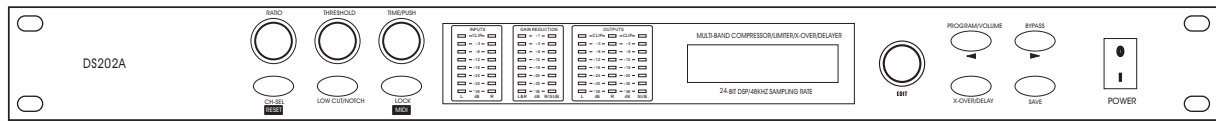
Please make sure that all units have a proper ground connection. For your own safety, do not remove the ground connection within the unit or at the supply, or fail to make this connection at all.

This machine is only intended for qualified personnel to operate & install. Do not attempt to repair and service yourself but referred to qualified technical service personnel. The user must have sufficient electrical contact to earth. Electrostatic charges might affect the operation of the DS202A.

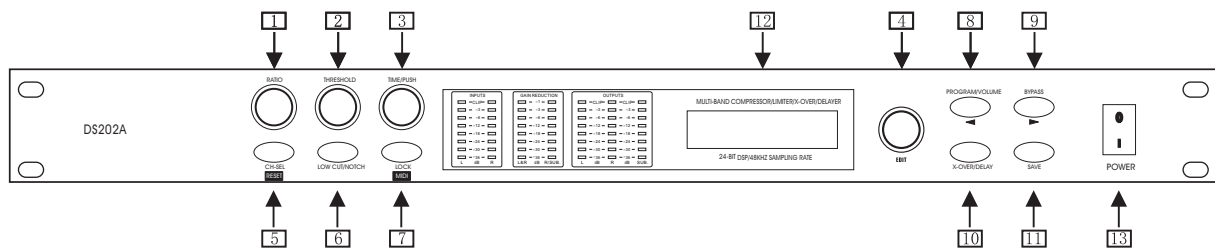
**NOTICE:** Before switching voltage for local supply requirement, fuse must be installed with correct type and rate. When the power supply is 220V/240V, fuse is 315mA; and the power supply is 110V/120V, fuse is changed to 630mA. The switch is preset to 220V/240V in the factory.



# DS202A



- ☆ 24-bit S-D,A/D,D/A,48kHz sampling rate
- ☆ Compressor/limiter
- ☆ 3 kinds of output mode
  - 2 inputs, 2 outputs
  - 2 inputs, 2 outputs + sub
  - 2 inputs, 3 outputs
- ☆ Notch and low cut filter to improve the noise
- ☆ 20 programs. First 3 programs are preset by factory, the other 17 programs can be named, saved and recalled.
- ☆ MIDI control
- ☆ 2X16 character LCD with backlit

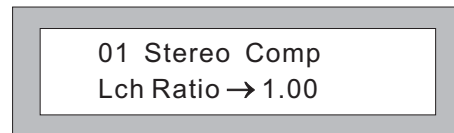


- 1.RATIO: adjust the compression ratio
- 2.THRESHOLD: adjust the compression threshold
- 3.TIME: adjust the constant time and push it to  
select different parameters
- 4.EDIT: turn it to edit the parameters
- 5.CH-SEL/RESET: select channel/system reset
- 6.LOW CUT/NOTCH: select low cut function/notch function
- 7.LOCK/MIDI: function key lock/MIDI function set
- 8.PROGRAM/VOLUME: select program number/adjust the volume  
"←": move the cursor to the left for editing program name
- 9.BYPASS  
"→": move the cursor to the right for editing program name
- 10.CROSSOVER/DELAY: select crossover/delay menu
- 11.SAVE: select save function
- 12.LCD: display all the parameters with character backlit
- 13.POWER: switch ON/OFF

## Instruction:

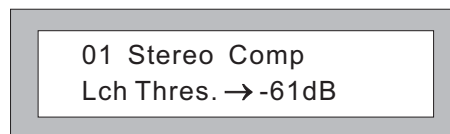
1. Directly-selected encoders, for example, RATIO, THRESHOLD and TIME encoders, are adopted for convenient operation.

Turn encoder 1 to adjust the compression ratio, and "→" indicates the change of the value (as fig.1). The adjustment range: "1.00~Limit".



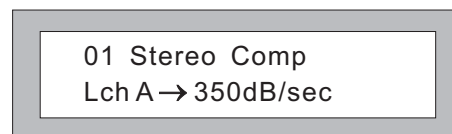
*Fig.1*

Turn encoder 2 to adjust the compression threshold (as fig.2). The adjustment range: "-61dB ~0dB", step: 1dB.



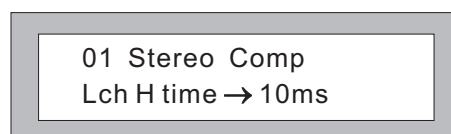
*Fig.2*

Turn encoder 3 first to adjust attacktime (as fig.3). The adjustment range: "0~350dB/Sec".



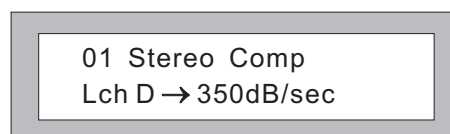
*Fig.3*

And then press encoder 3 and turn it to adjust holdtime (as fig.4). The adjustment range: "0ms~100ms".



*Fig.4*

Press encoder 3 again and turn it to adjust decaytime (as fig.5). The adjustment range: "0~350dB/Sec".

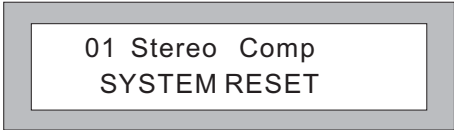


*Fig.5*

## Note:

Under the mode of "Mono Comp+Sub" or "Two Brand Comp", the channel indicates "L&R" and "Sub". In this case, three parameters, Compression ratio, threshold and time, are adjusted simultaneously for left and right channels.

2.CH-SEL-Press it shortly to select the channel to be adjusted ,and the Corresponding information is showed on the left-bottom of the LCD. Under the mode of "Stereo Comp","Lch" and "RCH"can be selected; Under the mode of "Mono Comp+Sub"or "Two Brand Comp", three channels "Lch", "Rch"and "Sub", can be selected. Press "RESET"button longer and then the system is reset to factory default settings.

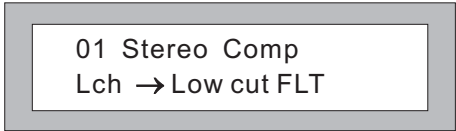


*Fig.6*

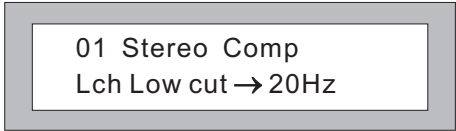
3.LOW CUT/NOTCH-Press it to enter the sub-menu of LOW CUT and NOTCH(as fig7).In this case ,turn encoder 4 to select one of the following six sub-menus,"→LOW CUT SWITCH","→LOW CUT FLT", "→NOTCH SWITCH","→LQ NOTCH FLT", "→MQ NOTCH FLT " and "→HQ NOTCH FLT". Press the key again and then turn encoder 4 to adjust the value of the corresponding sub-menu(as fig.8).

The adjustment range of LOW CUT:"20Hz-200Hz",step:10Hz;

The adjustment range of NOTCH:"40Hz-110Hz",step:5Hz.



*Fig.7*



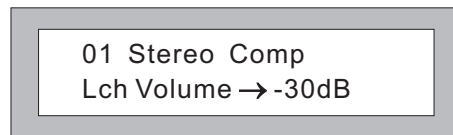
*Fig.8*

4.LOCK-First press it about 3 seconds to lock all the function buttons and the information of LOCK is showed in the LCD (as fig.9). Press it again, then all buttons resume to its original.



*Fig.9*

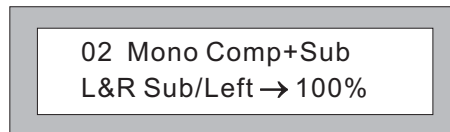
5.PROG/VOL -Press it and then turn encoder 4 to select one of 20 different programs ,among which No.1, 2 and 3 programs are preset by factory and can not be changed(as fig.1);Press it again and then turn encoder 4 to adjust the volume of corresponding channel (as fig. 10) the adjustment range of the volume:"MUTE~+6dB".



Under the mode of "MONO COMP+Sub" or "Two Band Comp", press "PROG/VOL" for about two seconds to select the level ratio of the input subwoofer from left and right Channels.

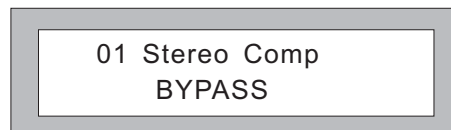
The adjustment range of "Sub/Left": "OFF~100%", step: 10%;

The adjustment range of "Sub/Rch": "OFF~100%", step: 10%.



*Fig.11*

6. BYPASS-First press it to disable the compression (as fig.12). Press it again to resume the function.



*Fig.12*

7. CROSSOVER/DELAY: First press it and then turn encoder 4 to select the sub-menu of CROSSOVER and DELAY (as fig.13).



*Fig.13*

Under the mode of "stereo", only the sub-menus under DELAY can be operated, including "→ Millisecond" "→ Del Meters" "→ Del Feet"; Under the mode of "Mono+Sub" or "Two Brand", the following two sub-menus "→ High Pass(HPF)" and "→ Low Pass(LPF)", are also available to select; Under the mode of "Two Band Comp", another sub-menu "→ Phase" is added.

Press it again and then turn encoder 4 to edit the value of the corresponding Sub-menu.

The adjustment range of High Pass: "20Hz~250Hz", step: 5Hz;

The adjustment range of Low Pass: "20Hz~250Hz", step: 5Hz;

The adjustment range of Delay: "0ms~3.5ms", step: 0.05ms;

"0mm~1201mm", step: 17mm;

"0ft~3.945ft", step: 0.057ft;

The adjustment range of phase: 0, 180°.

**Note:**

In the case of Mono and Crossover compression, the crossover frequency of the High Pass and the Low Pass is adjusted simultaneously in order to ensure the frequency response.

8.SAVE-First press it to enter the editable stage. As the first 3 programs have been preset by factory and can not to be edited again, the editable programs for the user can only start from No.04 (as fig.14).The max sequence number:20



*Fig.14*

Press "→" or "←" button to move the cursor to the correct position and then turn encoder 4 to select the correct editable symbol. Press it again(as fig.15),and the information of "SAVE NOW" disappears after about three seconds, which shows that the function is finished.



*Fig.15*



## REAR PANEL



**1. MAIN CONNECTOR/FUSE HOLDER/VOLTAGE SELECTOR:** Before you connect the unit, please make sure that the displayed voltage corresponds to your Mains supply. Please note that the AC voltage selection is defined by the position of the Fuse Holder. If you intend to change the two markers monitors the selected voltage, Please note that, depending on the mains voltage supplied to the unit, the correct fuse type and rate must be installed (see Technical Specifications). Please use the enclosed main cable to connect the unit to the mains power supply.

**2. ANALOG OUTPUT:** XLR or TRS output socket, Parallel between XLR & TRS input. Balanced & Unbalanced configuration.

**3. ANALOG INPUT:** XLR or TRS input socket, Parallel between XLR & TRS input. Balanced & Unbalanced Configuration

**4. INPUT LEVEL:** adjust the unit to different level from -20dB to +4dB

**5. MIC OUTPUT SOCKET**

**6. MIC INPUT SOCKET**

**7. SUBWOOFER OUTPUT**

**8. MIDI INPUT**

**9. VOLTAGE SWITCH:** 110/120V or 220/240V

## TECHNICAL SPECIFICATIONS

### Analog Inputs

Connectors	XLR and 1/4" jack
Type	RF filtered, servo balanced , 20kOhms unbalanced
Impedance	40kOhms balanced, 20kOhms unbalanced
Nominal Operating Level	-20dB to +4dB

### Analog Outputs

Connectors	XLR and 1/4" jack
Type	Electronically servo-balanced output stage
Impedance	66kOhms balanced, 33kOhms unbalanced

### System specifications

Frequency Response	20Hz ~ 20KHz, $\pm 1$ dB
Dynamic Range	>112dB,20Hz~ 20KHz
S/N	>115dB
THD	<0.065%,@1KHz,0dB

### Compression

Threshold	-61dB ~ 0dB,1dB step
Ratio	1.0 ~ Limit
Detect Time	0 ~ 350dB/Sec
Attack Time	0 ~ 100ms
Decay Time	0 ~ 350dB/Sec

### MIDI Interface

Type	5-Pin-DIN-Socket
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### Digital Processing

Converters	24-bit Sigma-Delta
Sampling Rate	48KHz

<b>Display</b>	2 × 16 LCD display
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### Power supply

Mains supply	General Export Model 110-120V,200-240V, 50-60Hz
Fuse	110-120VAC: 250mA(slow-blow) 200-240VAC: 125mA(slow-blow)
Power consumption	10W
Mains connection	Standard IEC receptacle

### Physical

Dimension	45 × 482 × 152(mm)
Gross weight	3 kg