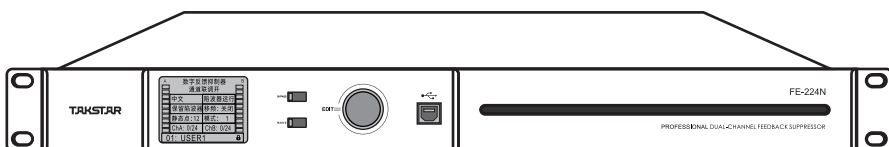


# TAKSTAR® 得胜

## 用户手册 User manual



# FE-224N

## 数字反馈抑制器

Digital Feedback Suppressor

## Preface

Dear Customer,

Thank you for purchasing Takstar FE-224N Digital Feedback Suppressor. In order to better understand and use the product, please read this manual carefully.

If you have any questions or suggestions, please contact our local dealer.

## Product Features

1. Each input channel includes gain control, 24-band PEQ, noise gate, frequency shifter, crossover and compressor.
2. LCD screen shows info such as channel level, status of each function and current mode.
3. 2CH XLR balanced inputs, 2CH 6.35mm balanced inputs, 2CH XLR balanced outputs, and 2CH 6.35mm balanced outputs.
4. With PC control software to help you configure settings flexibly and import data for single/all channels via USB connection, compatible with Win10 64bit OS.
5. Well-rounded RF & electrostatic protection circuits on all input/output interfaces to ensure reliable performance.

# FE-224N Digital Feedback Suppressor

## Specifications

Test Conditions: normal working environment, balanced input +4dBu@1kHz sinusoidal analog signal, volume 0dB, all functions bypassed

Frequency Response: 20Hz~20kHz  $\pm 0.3$ dB

Distortion (THD+N): <0.03% @1kHz

ADC&DAC Dynamic Range: >115dB

Input Impedance (balanced): 10k $\Omega$

Output Impedance (balanced): 100 $\Omega$

Isolation: <-100dB@1kHz

Max Input Level: >15dBu@1kHz

Max Output Level: >15dBu@1kHz

Noise Floor: <-84dBu

System Delay: <2ms

Power Supply: ~220V, 50Hz/60Hz, consumption <20W

Dimensions (WxDxH): 483x 268x45 (mm)

Operating Ambient Temperature: 0°C~+40°C

Storage Ambient Temperature: -10°C~ + 60°C

Digital Sampling Rate & Depth: 96kHz 24bit AD/DA 400MHz 32bit floating point DSP

Net Weight: 3.5kg

Note: The above data are measured by Takstar laboratory which has the final interpretation right!

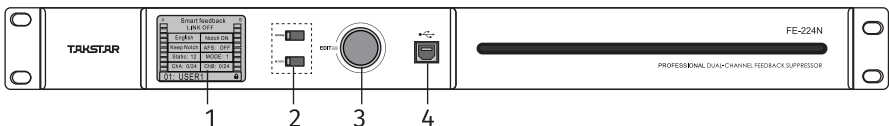
## Application

Meetings, performances, lectures, report halls, etc.

## Standard configuration

Digital Feedback Suppressor.....	1 PC.	Power Cord.....	1 PC.
User Manual.....	1 PC.	USB Drive.....	1 PC.

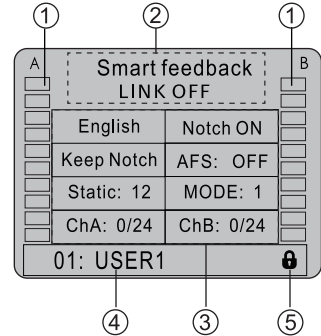
## Panel Description



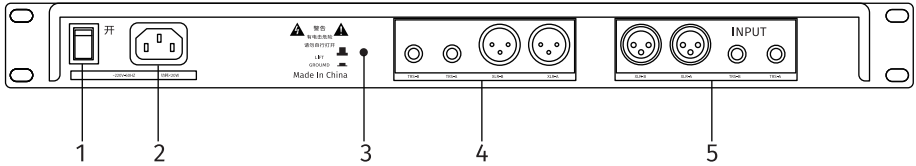
1. LCD screen: display the current status info, volume info and mode status of each channel.
2. Function buttons: BYPASS status button, MODE switching button.
3. Editing wheel: with press-to-click function. Rotate counterclockwise to move the cursor position on the display screen and edit each function module.  
Driver-free USB interface: connect to the PC for configuration through the
4. dedicated PC software.

## Display Content Description

- A/B channel mute status and output signal meter: red at the top of the signal meter indicates signal CLIP overload (over +18dBu), yellow indicates approach-overload zone (+12dBu), green indicates signal level -36dBu~+6dBu, 8 levels in total (the second green bar under the yellow light indicates normal working level 0dBu), 6dB/level.
- Channel link on/off status
- Function area
  - Chinese/English switch
  - Notch filter switch: BYPASS / ON
  - Notch filter setting: indicate whether to keep or clear the current auto-captured feedback point.
  - Audio frequency shift setting: OFF, 2Hz, 3Hz, 4Hz, 6Hz, 8Hz, a total of 6 levels.
  - Static working point setting: set the number of successive notch points detected that are not covered within dynamics
  - Mode selection: user mode selection, load the stored user feedback mode as per your needs.
  - ChA:0/24, ChB:0/24: indicate the number of feedback points that are currently auto-captured by channel A/B, up to 24. It turns yellow if more than 17 points, and turns red if more than 21 points.
- Preset: display preset number and preset name.
- Panel lock: lock icon flashes when the panel is locked, disallowing any panel operation (press and hold the EDIT knob for 3 seconds to unlock or lock)ing



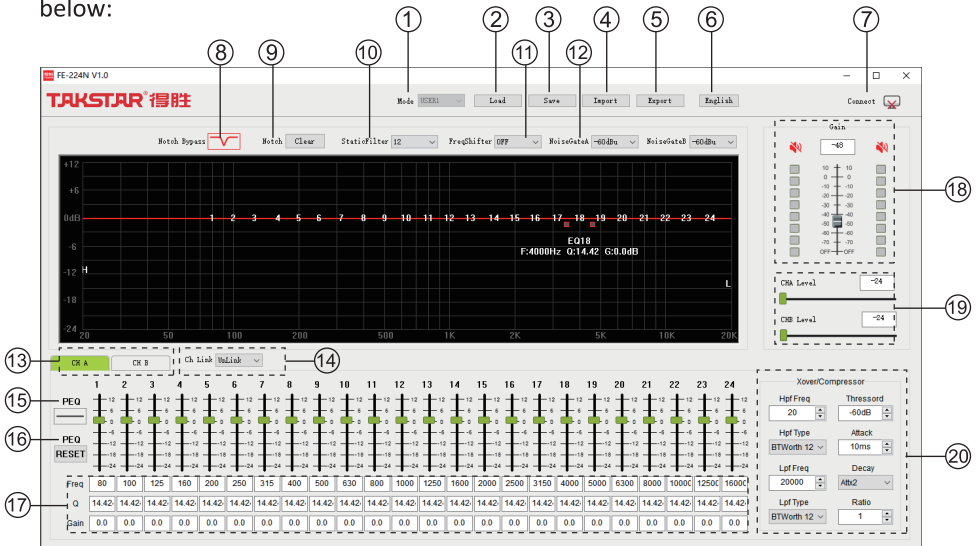
## Rear Panel Description



1. Power switch: turn on or off the power
2. Power socket: AC220V AC input port
3. Ground lift switch: case grounded if the switch is depressed; ground lift if raised. (Ground lift is a technique used to reduce or eliminate ground-related noise arising from ground loops in audio system)
4. Output channel: A/B channel output ports, including standard XLR outputs and 6.35mm balanced outputs
5. Input channel: A/B channel input ports, including standard XLR inputs and 6.35mm balanced inputs

## Software Description

The software supports win7, win10 and above operating systems, as well as USB driver-free installation. Click to run the program, the startup interface is shown below:

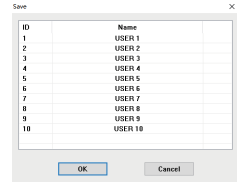
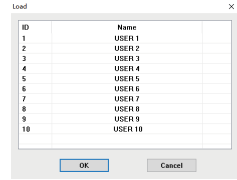


## Software Description



1. Mode: show which mode the current device is in.
2. Load: as shown in the picture, you can load a specific mode from the saved mode list. The list can have up to 10 modes.
3. Save: save the current device parameters to a specific mode by selecting any of the mode name in the list and clicking "OK" to save. Double-click a mode name to modify the mode name in a pop-up dialog.
4. Power switch: turn on or off the power
5. Power socket: AC220V AC input port
6. Ground lift switch: case grounded if the switch is depressed; ground lift if raised. (Ground lift is a technique used to reduce or eliminate ground-related noise arising from ground loops in audio system)
7. Output channel: A/B channel output ports, including standard XLR outputs and 6.35mm balanced outputs
8. Input channel: A/B channel input ports, including standard XLR inputs and 6.35mm balanced inputs

: notch filter running

: notch filter bypass



## Software Description

9. Notch filter: click the "Clear" button to clear all current notch points, and the device will start scanning feedback points again.
10. Static filter: set the number of currently scanned notch points for protection. When a new dynamic feedback point is still detected after the maximum 24 notch points are used up, the device will capture the notch points after the set value. The points before the static notch point are retained and not overwritten.
11. Frequency shift: support 8Hz frequency shift range at max.
12. Noise gate: set the appropriate noise gate threshold according to the current system noise level. Beware the possibility of sound interruption if the threshold is set too high.
13. Channel A/B: select the channel to configure.
14. Channel link: set AB channel linked or separate configuration.
15. PEQ status button:  means PEQ is enabled, and  means PEQ is bypassed.
16. PEQ reset: PEQ parameter reset, click the "Reset" button to reset the current PEQ parameters
17. PEQ point parameters: frequency, Q value, gain; can be manually input and adjusted.
18. Channel mute switch, gain control, level meter
19. Channel A/B output volume control
20. Crossover/Compressor: crossover can set high/low-pass cut-off frequency and filter type; compressor can set start threshold, attack time, release time and compression ratio.



## 注意事项：

1. 本单为保修凭证，请用户妥善保管，如有遗失，恕不保修或退换。
2. 保修期限制：购买之日起十二个月内。
3. 除了不可抗力事件损坏外，由本公司负责，免费维修。
4. 如属保管不善或使用不当造成的损坏，维修点将酌情收费。
5. 擅自拆卸维修者，不予保修。
6. 以上保修条款仅限于中国市场适用（不包含港澳台地区）。

## 产品服务保证书

姓名：\_\_\_\_\_ 电话：\_\_\_\_\_ 地址：\_\_\_\_\_

商品：\_\_\_\_\_ 型号：\_\_\_\_\_ 购买日期：\_\_\_\_\_ 年 \_\_\_ 月 \_\_\_ 日

维修记录栏(由维修员填写)	维修员签名	日期

◆ 广东得胜电子有限公司 ◆ 电话：400-6828-333 ◆ 地址：广东省惠州市博罗县龙溪街道富康一路2号





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