

Feedback Suppressor



Audio Conference System

DESCRIPTION

The NVS-70020002FS is an advanced digital feedback suppressor that offers excellent performance at a competitive price. It allows you to store 10 sets of data for controlling tone quality in different situations. During suppression process the attenuation range may be as low as -48dB. When feedback is detected, the device swiftly and automatically analyses and locks the feedback frequency using its advanced DSP algorithm. It determines the frequency point, frequency bandwidth, and attenuation of the notching filter, and saves the processing results. By controlling the frequency bandwidth of the notching filter, the device filters out only the feedback signal, preserving the music signal without compromising its quality, resulting in exceptional audio fidelity. The major features of the device include: Refined frequency search, adjustable suppression width, and display of parameters.

FEATURES

- ◉ 24-bit A/D and D/A conversion, high resolution
- ◉ Each track allows automatic search for 12 frequency feedback, intelligent processing
- ◉ Prompt and easy default processing and complete feedback suppression performance
- ◉ In single-point mode, the device will automatically search for and lock notch frequency until the device is manually reset or reconfigured
- ◉ In manual mode, the user can set all parameters of 2×12 filters, including their frequency and Q value, etc
- ◉ Servo balanced input and output, gold plated XLR and TRS terminals
- ◉ Two modes (SING and AUTO) available on each filter
- ◉ Two parallel processing modules, the left and right channel may be adjusted independently or in parallel
- ◉ 24-bit high-performance DSP, ensuring signal resolution and dynamic range
- ◉ Soft start of switches, free of knocking sound, noise gating function
- ◉ Backlight 2×16 character LCD
- ◉ 2×7 LED level display, capable of displaying input or output level
- ◉ High-quality SMD components and automatic SMD welding and online testing technologies ensure high quality and reliability of the product
- ◉ Specialized internal power supply system

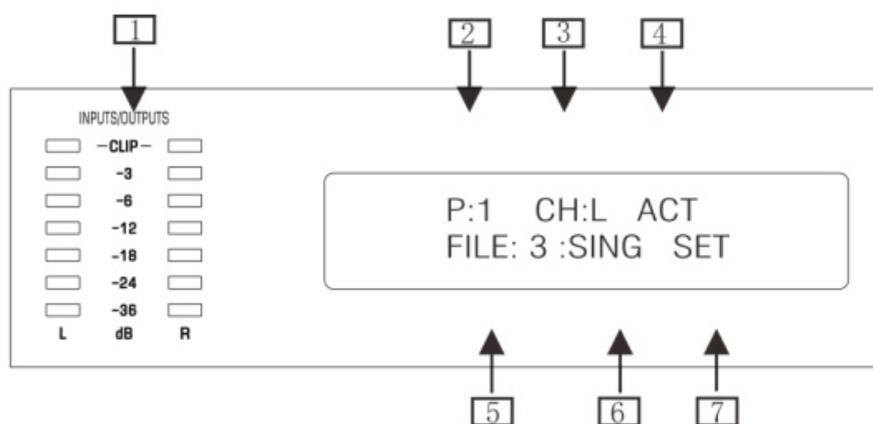
Specifications	
Model	NVS-70020002FS
Number of Input Channel	2 channels, (2 XLR, 2 1/4" TRS)
Number of Output Channel	2 channels, (2 XLR, 2 1/4" TRS)
Input Impedance	Unbalanced 10kΩ/balanced20kΩ
Output Impedance	150Ω
Maximum Input Level	10.5dBu
Maximum Output Level	10.5dBu
Sampling Frequency	48kHz
Gain	0dB(+4dB gear), 12dB(-10dBVgear)
Suppression Time	0.3s@1kHz
Audio Gain	9dB
Dynamic Range	106dB, A weighting
Frequency Response	20Hz-20kHz, ±0.5dB
CMRR	≥55dB(+4dBu gear), ≥75dB(-10dBVgear)
Crosstalk	≤97dB
Distortion + Noise	≤0.0025(@1kHz, +4dBu)

Feedback Suppressor

SNR	100dB, A weighting, refer to+4dBu
Power Supply	100V-240Vac 50/60Hz
Power Consumption	≤10W
Fuse	T1AL/250VAC
Product Dimensions	[L×W×H] 482×152×45(mm)
Package Dimensions	[L×W×H] 515×245×75(mm)
Gross Weight	2.2kg
Net Weight	1.7kg

FRONT PANEL

Menu Functions:



(1) 2×7 LEDs respectively used for input/output level indication of left and right channels.

(2) "P:" Program selection menu, when selected, ":" changes to "->", the user can select any program set from 0 to 9 by turning the encoder.

(3) "CH:" Left/right channel parameter adjustment activation menu, when "CH:L" is selected, adjustment to left channel parameters is activated; when "CH:R" is selected, adjustment to right channel parameters is activated; when "CH:LR" is selected, adjustment to parameters of both left and right channels is activated.

(4) When "BYP" is shown, all feedback suppression filters of the current channel are bypassed. When "ACT" is shown, the settings on the filter is valid and input signals are processed by the feedback suppression filter.

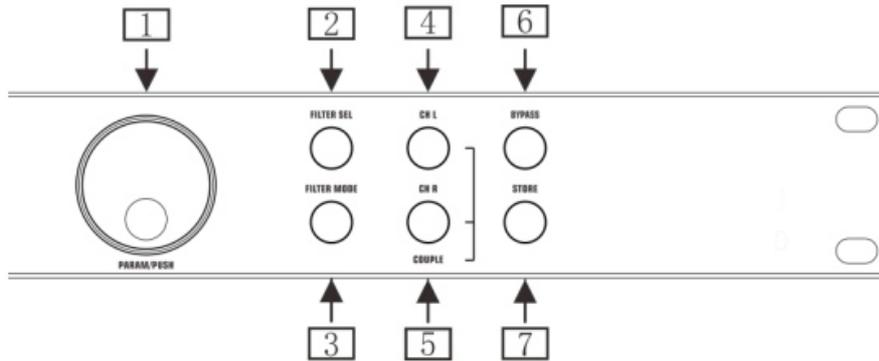
(5) "FILE:", when prompt ":" changes to "->", the user can select any filter marked 1 to 12 by turning the encoder.

(6) ":SING", when prompt ":" changes to "->", the user can press PUSH button to enter the display menu of current filter and Q value. In SING mode, the user can adjust the frequency and Q value, while in AUTO mode, the frequency and Q value will be simply displayed but cannot be edited. If "SV" (indicator of parameter memory change) is shown, it means that the parameter has been modified. After the user pressed the "STORE" button, "SV" changes to "SC", reminding the user whether to remember the parameter, when the user presses the "STORE" button again, "SC" disappears, which means that the new parameter has been recorded in the current channel.

(7) ": SET", when prompt ":" changes to "->", the user can press PUSH button to enter SING mode filter setting menu: in the first step, the user should set up the quantity of SING filters and then press PUSH button to choose if the SING filter parameters are to be reset. The user can press PUSH button again to complete SING filter configuration.

Feedback Suppressor

Functional Keys and Encoder:



[1] PARAM/PUSH encoder with switches, allows adjustment to a large variety of parameters and the user can enter the menu by press the PUSH button.



[2] FILTER SEL (Program/filter selecting button), the user may select up to 12 filters or 10 programs. When "P->" is displayed, the user may select desired programs; when pressing this button once, "FILTER->" will be displayed on the LCD, and at such time, the user may select desired filters. When pressing the button once again, "P->" will be displayed and the user may select desired programs.

[3] FILTER MODE (Filter mode selecting button). When this button is pressed, the user can select the operating mode of filter with the encoder. Two modes available: "SING" (single-point mode) and "AUTO" (automatic mode). In addition, when the user presses down buttons FILTER MODE and FILTER SEL at the same time, he/she can enter the auxiliary parameter configuration menu (NOISE GATE, HPF, LPF, Q, LED DISPLAY, SENSITIVE).

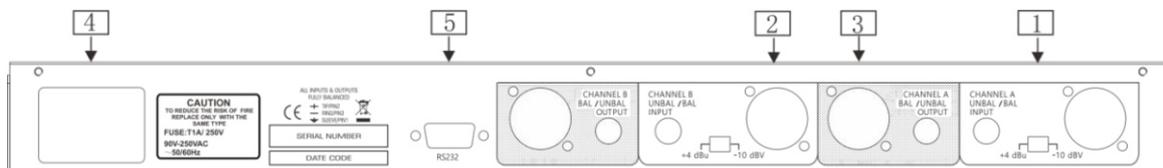
[4] CHL, [5] CHR Left/right channel parameter adjustment activation button, which may be used to modify parameters of the left and right channels. If the user wishes to modify parameters of both the left and right channels, he/she should press buttons CHL and CHR at the same time. In addition, when the user modifies any of the two channels and then switches to parallel mode, the parameters of one channel will be copied to the other, that is, if the user presses CHL button before he/she presses CHR button, parameters of the left channel will be copied to the right channel.

[6] BYPASS may be used to bypass all feedback suppression filters.

[7] STORE button. The user may use the STORE button to save any modification to the preset value. Please note that the user needs to press the button twice continuously to save the parameters before the saving prompt disappears.

Feedback Suppressor

Rear Panel:



[1] INPUT LEVEL, input level adjusting knob. The device can be adapted to different working levels through the toggle switch, and you can choose +4dBu or -10dBV.

[2] ANALOG INPUT. This product has XLR or TRS input jacks, and each group of XLR and TRS jacks is connected in parallel and can be used for balanced or unbalanced connections.

[3] ANALOG OUTPUT. This product has XLR or TRS output jack, and each group of XLR and TRS jacks is connected in parallel and can be used for balanced or unbalanced connections.

[4] Power socket. Before connecting the device to the power source, please make sure that the displayed voltage corresponds to your local mains power supply. Please note that a fuse of proper type and rated value should be installed in this device on the basis of the power supply voltage required by this device (Please refer to section 4.1 "Specifications"). Please connect the device to the mains power supply with the enclosed power cable.

[5] RS232 interface for firmware upgrade.

ORDERING INFORMATION

Part Number	Description	Standard Quantity
NVS-7002002FS	Feedback Suppressor	01