

FBX-SOLO SL-820

FEEDBACK
EXTERMINATOR®

FBX-SOLO SM-820

FEEDBACK
EXTERMINATOR®

20-bit

8 filters

SABINE®
ADAPTIVE AUDIO



FOR ANY
DEVICE WITH
1/4" CONNECTORS!

LOCKING FIXED FILTERS
FREEZES PLACEMENT
AND DEPTH

PROGRAMMABLE
NOISE GATE

■ **FBX Filters:**
**the only way
to kill feedback
during setup
and during
the program!**

■ **Super-narrow
FBX Filters kill
feedback, not
your sound.**

■ **20-bit digital
for the cleanest
sound ever.**

The ultimate and affordable solution to feedback problems is now even better with the new FBX-SOLO 820 Series. The SOLO 820s are the ultimate because they provide targeted feedback control – each mic gets its own automatically customized FBX filters; the SOLO 820s are an even better value because we've improved performance and audio quality, added new features, and kept the same low price!

Like all the FBX Feedback Exterminators, the FBX-SOLO does what no other audio product can do: It automatically detects and eliminates feedback while leaving the sound crystal clear. The patented algorithm distinguishes music from feedback so it even works during the program, not just at setup time.

If you use your 31-band EQ just to shape your sound and let your FBX control feedback, you should expect up to 9 dB more gain and a dramatic improvement in the sound quality. Why? When you pull down a graphic EQ slider to chase feedback, you also pull out a big chunk of your sound. FBX constant-Q filters are 10 times narrower than graphic EQ filters. Narrow filters mean more gain and more clarity. *It's that simple.*



FOR MICROPHONES
WITH XLR CONNECTORS!

LOCKING FIXED FILTERS
FREEZES PLACEMENT
AND DEPTH

PROGRAMMABLE
NOISE GATE

PATCH IN:



PATCH OUT:



FBX-SOLO SL-820, w/ 1/4" CONNECTORS

USE THE SOLO SL-820 FOR:

- MIXER INSERT POINTS – INPUT CHANNEL OR SUB-GROUP, MICS OR INSTRUMENTS
- POWERED MIXERS
- INSTRUMENTS WITH PICKUPS – INTO YOUR AMP OR THE MIXER
- GREAT FOR KARAOKE AND HARMONICA MICS!
- ANY DEVICE WITH 1/4" CONNECTORS

FILTER WIDTH
SELECT

UNITY GAIN:
LEVEL IN =
LEVEL OUT

USE A SINGLE 1/4" TRS
CORD FOR INSERTS

New Features of the 820 Series:

- 20-bit digital
- Greatly enhanced frequency response and dynamic range
- 8 Patented FBX Filters
- Improved FBX algorithm – faster and more accurate
- Two-stage filter reset – reset just Dynamic filters or all filters

Here's what you get with the FBX-SOLO:

- More gain... for the first time you'll have to turn down the monitors!
- Increased clarity and intelligibility... narrow filters remove feedback and leave your sound untouched
- Automatic feedback control... in setup and during the performance
- Programmable Noise Gate

FAST ONE-MINUTE SETUP!

- PATCH IN THE SOLO...
- RAISE THE CHANNEL GAIN AND LET THE SOLO KILL THE FUNDAMENTAL FEEDBACK POINTS...
- ADJUST CLIP LEVEL, AND YOU'RE READY TO GO!

The FBX-SOLO is the perfect solution for wireless mics – you'll be able to move freely without worrying about feedback. Patch it in your monitors and they'll be so loud you may have to turn them down. Get the volume you want with your acoustic/electric instrument or harmonica mic and keep that rich tone. And the built-in noise gate provides the control you need in multi-mic locations like conference rooms and courthouses. Wherever you have a microphone, the FBX is the most effective and least expensive way to make a dramatic improvement in your sound system.

Hearing is believing – ask your dealer today for a demo of the affordable new **FBX-SOLO 820 Series**.

PATCH IN:



PATCH OUT:



FBX-SOLO SM-820, w/ XLR CONNECTORS

USE THE SOLO SM-820 FOR:

- BALANCED MICROPHONES
- SWITCHABLE PHANTOM POWER
- MIC LEVEL OR LINE LEVEL OUT

FILTER WIDTH
SELECT

SWITCHABLE
OUTPUT LEVEL:
MIC OR LINE

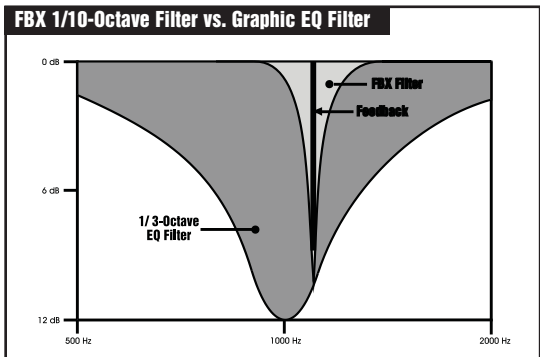
PROVIDES 48V
PHANTOM POWER

13301 Highway 441
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Tel: (386) 418-2000
Fax: (386) 418-2001

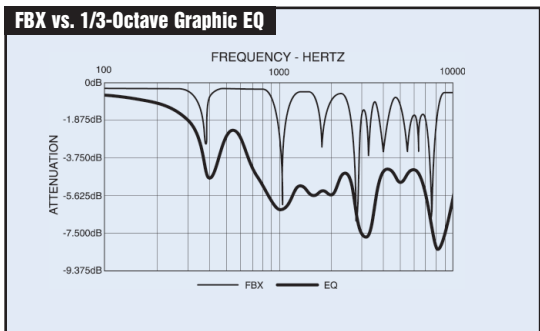
www.sabine.com

THE INSIDE STORY ON FBX FILTERS

FBX filters come in two types: fixed and dynamic. Both are placed the same way: Feedback is detected and ultra-narrow filter is placed just deep enough to eliminate it. The difference comes after the filter is placed. Fixed filters remain on the initially detected feedback tone - they do not move. These filters provide the initial maximum gain before feedback and are set automatically during setup. Dynamic filters can release and move to new feedback frequencies, and are for adaptive feedback control during the performance. Factory default is 6 fixed and 2 dynamic, but this is easily changed using front panel controls. For maximum gain before feedback, use more fixed filters. For more adaptive feedback control during the show (for example, with several roving wireless mics), use more dynamic filters.



A DIRECT HIT ON FEEDBACK! The FBX-SOLO precisely targets feedback without taking a big chunk out of your sound. Test prove that a single 1/3-octave EQ slider pulled down 12 dB removes almost half of the power going to the speakers over a two-octave range. And, as the above illustration shows, you can't place a graphic EQ filter exactly on the ringing frequency. When you pull down multiple sliders in a normal setup (below), you end up with giant holes in your music. FBX filters are ten times narrower – you get back more than 90% of the power you lose with a graphic EQ! That means more gain before feedback and no loss in your sound quality.



A PA System was set up using a microphone, mixer, FBX, power amp and two speakers. The system's gain was raised until the FBX removed nine feedback points. Next the FBX was replaced with a graphic EQ. The EQ was adjusted while the system gain was raised to the same level achieved with the FBX. The frequency response curves of each device were then plotted.

FBX ENGINEERING SPECIFICATIONS

Filters

Eight independent digital notch filters controlled automatically from 40Hz to 20 KHz

Filter width: user-controllable, 1/10 or 1/5 octave, True Constant Q*

Filter depth: DSP controlled, variable to -40dB

Resolution: 1/50 octave

Time required to find and eliminate feedback: 0.4 seconds, typical @ 1KHz

Total number of combined filters active: User selectable, from 1 to 8

Number of Dynamic vs. Fixed filters: User selectable

Last configuration stored in memory

Input/Output – SL-820 only

I/O Connectors: 1/4" TRS; tip=input, ring=output, sleeve=ground

Input Impedance: Unbalanced >1 meg Ohm

Output Impedance: Unbalanced 10 Ohms nominal; Maximum load 2K Ohms

Maximum Input/Output Level at lowest gain: +20 dBV Peak

Gain Range (with line out selected): 0 to +35 dB (high in), +30 to +65 dB (low in)

Input to Output Gain @ unity setting: +/- 0.5 dBV

Bypass: Digital

Input/Output – SM-820 only

I/O Connectors: XLR-3 PIN 2 high balanced

Input Impedance: 1 K Ohm nominal

Output Impedance: Unbalanced 10 Ohms nominal; Maximum load 2K Ohms

Maximum Input/Output Level at lowest gain: -10 dBV**

Gain Range: -15 to +20dB (at high output)

Input to Output Gain @ unity setting: +/- 0.5 dBV

Bypass: Digital

EIN: -105dBm @ 150 Ohms, 20Hz-17KHz or better

Phantom Power: 48V switch selectable

Performance***

Frequency Response: < +0.25 dB, 20 Hz to 20 KHz

SNR: >94dB typical

THD: <0.01% @ 1KHz @ +15 dBV

Dynamic Range: >100dB

Noise Gate

Attack Time: Fixed (400 mS)

Threshold: Selectable (-24dB, -36dB, -48dB, -60dB)

Power Supply

8-20VDC @ 400 mA

Dimensions

1-U height, 1/6-U width; 2.78 x 1.65 x 5.5 in. (6.95 x 4.13 x 13.75 cm)

Weight

9.0 oz. (0.26 kg)

Options

SL6RACK Rack Tray (holds up to six units)

*Below approximately 200 Hz the feedback filters become slightly wider to increase the feedback and rumble capture speed at these low frequencies.

** (Note: Inputs may be balanced or unbalanced. For maximum output capability, outputs must be balanced (XLR). If either side of an input is grounded, the peak output and dynamic range will be reduced by 6 dB.

*** Tests performed using an Audio Precision System One model 322 or equal. (SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE)

WHO RELIES ON THE FBX:

- NASA
 - The Late Show With David Letterman
 - Walt Disney Company
 - Luxor Hotel
 - American Stock Exchange
 - Shea Stadium
 - Oprah Winfrey Show
 - Sydney (Australia) Olympic 2000 Site
 - Hewlett Packard
 - Jacob Javitz Convention Center
 - Museum of Flight
 - Grand Ole Opry
 - Kentucky Derby Museum
 - Singapore World Trade Centre
 - Iowa State Education System
 - Hyatt Regency, San Francisco
 - Craig Chaquico
 - Cathedral of the Madeline, Salt Lake City
 - Full Sail Center For Recording Arts
 - Orlando Arena
 - Australian Federal Parliament
 - NBC Studios Los Angeles
 - Ohio University Telecommunications Center
 - Citrus Bowl
 - Offspring
 - Capitol Radio
 - Crystal Cathedral
 - Sea World
 - MGM Studios
 - Australian Television Network
 - CBS Sound Shop
 - Sounds Great Enterprises
 - Sound Services
 - Canadian Broadcast Company
 - TNN (The Nashville Network)
 - Up With People
 - Jacksonville Jaguars Stadium
 - United Nations (New York)
- ...And thousands more!

FBX APPLICATIONS:

SOUND REINFORCEMENT

- Mains
- Monitors

MIXER INSERT POINTS

POWERED MIXER PATCH POINTS

HIGH-IMPEDANCE & BALANCED MICROPHONES

ACOUSTIC GUITARS WITH PICKUPS

INSTALLATIONS

- Theatres
- Schools
- Churches
- Hotels
- Conference Rooms
- Sports Arenas
- Courtrooms

TELECONFERENCING

INTERCOMS

INTERACTIVE REMOTE CLASSROOMS