



Technical Features

- Digital 2-by-2 Audio Processor with Soundplex® signal processing for all dual-mono or stereo applications
- Automatic feedback reduction with patented “Adaptive Notch Filter Algorithm” and “Auto Clear” functions
- Free matrix mixing
- Soundplex Windows software

Description

The Shure DFR22E Audio Processor with feedback reduction is a 2-input, 2-output digital audio processor with XLR and Euro block connectors. It is designed to equal sound system response, providing dynamic processing and alignment delay, and automatically detect and control acoustic feedback. It can be used as an “out of the box” feedback reducer as well as an insert processor for installations. A built in 2-by-2 matrix mixer allows either or both inputs to be routed to either or both outputs, with additional controls for levels and polarity. Up to 16 presets can be stored into the unit and can be activated via buttons on the front side as well as the control input pins on the back side. These control input pins can also be used to adjust gain and mute channels by connecting switches (momentary or latching) or potentiometers. Further on the DFR22E is controllable by AMX/Crestron. Different security levels prevent or constrict an unauthorized access.

The included Windows software provides two modes for the configuration of the DFR22E. While the *Live Mode* allows you to make real-time adjustments to hardware presets, with *Design Mode* you create scenes that are later stored in the DFR22E. A preset/scene can easily be pro-

grammed via *drag and drop* of the available processor blocks. The required processor capacity, available delay time, as well as the audio levels are shown in the software window.

Available Processor Blocks

- Graphic EQs
10 and 30 band; +12 dB/-18 dB
- Parametric EQs
Available with 3, 5, 7, and 10 filters; width 1/70 to 4 octaves; ±18 dB
- Cut or shelf filter
High-/lowpass with a slope of 6, 12, 18, or 24 dB; Butterworth-, Bessel-, or Linkwitz-Riley-type
- DFR (Digital Feedback Reducer)
Automatic feedback reducer; 5, 10, or 16 notchfilters; width 1/10 to 1/70 of an octave; filter depths up to 18 dB, three options to enable Auto Clear functionality
- Delay
Up to 2 seconds per delay block; 10 s in total; 21 µs resolution
- Crossover/Mono-Sub
2 way Butterworth, Bessel, or Linkwitz-Riley filter with slopes up to 24 dB, adjustable gain/attenuation ±12 dB, switchable polarity
- Compressor/Limiter
Soft/hard knee option, stereo linking, look ahead peak limiter; threshold range 80 dB, attack 1 to 200 ms, decay 50 to 1000 ms, gate hold time 0 to 500 ms
- AGC
Automatic Gain Control, threshold -72 to -1 dB, attack 0.2 to 3 s, decay 0.5 to 5 s
- Ducker
Adjustable attenuation -100 up to 0 dB

Architects Specifications

Digital Audio Processor with feedback reducer, 19" metal housing, 1 U with 2 inputs and 2 outputs; line level, each with balanced XLR and Euro block connectors. LED metering for all audio levels, active filters, status of filters, preset, and power. Programmable via a RS-232 interface with the included Windows software (Live and Design Mode). 16 user programmable presets, including three preprogrammed presets.

Contact closures to remotely change preset, adjust gain and mute channels. AMX/Crestron control functionality. Different security levels.

Free signal routing of inputs to outputs with gain control and switchable polarity. Muting of individual or all inputs and outputs. Free insert of the following processor blocks:

- Graphic EQs (10 and 30 band)
- Parametric EQs (3, 5, 7, or 10 band with adjustable width)
- DFR – Digital Feedback Reducer with notch filters (5, 10, or 16 band)
- AGC – Automatic Gain Control
- Delay – up to 2 s (a total of 10 s, 21µs steps)
- Adjustable Compressor/Limiter (including look ahead peak limiter)
- Gate/Expander
- Crossover (2 ways with adjustable slopes and types)
- Splitter
- Ducker

Specifications

Frequency Response

20 Hz – 20 kHz (± 1 dB)

Sample Rate / Conversion

48 kHz/24 Bit

Dynamic Range

min. 110 dB(A), 20 Hz – 20 kHz

Clipping Level

In: min. 24 dBu
 Out: 24 dBu
 Out (12 dB pad): 12 dBu
 Out (18 dB pad): 6 dBu

Propagation Delay

< 1.5 ms

Impedance

Input: 10 k Ω
 Output: 120 Ω

Total Harmonic Distortion

< 0.05% (20 Hz - 20 kHz; +4 dBu)

Operating Voltage

100 – 240V, 50/60 Hz

Maximum Power Drain

45 W

Dimensions (HxWxD)

44 x 483 x 248 mm

Weight

2.83 kg

Requirements

- 166 MHz IBM compatible computer with Windows 98, NT or higher
- 48 MB RAM
- 20 MB hard drive space
- CD-ROM drive
- RS-232 serial port or approved USB-to-Serial port adapter