

DFR22 AUDIO PROCESSOR

The device shall have 2 analog audio inputs and 2 analog audio outputs. Phoenix (Euroblock) and XLR connectors shall be available on the back panel for each input and output. The inputs shall accept line level signals up to at least +24 dBu. The outputs shall have a clipping level of at least +24 dBu and shall provide analog pads for lowering the output clipping level to +12 dBu and +6 dBu. The frequency response of the device shall deviate no more than 1 dB from 20 Hz to 20 kHz. Analog-to-digital conversion and digital-to-analog conversion shall be performed at a resolution of 24-bit with a 48 kHz sampling rate. The overall dynamic range of the device from input to output shall be >110 dBA from 20 Hz to 20 kHz. The device shall have an internal, auto-switching power supply capable of accepting an operating voltage from 100-240 VAC, 50/60 Hz.

The device shall be configurable through a software interface capable of running on Microsoft Windows NT, 98SE, ME, 2000, XP Home, and XP professional. The software interface shall connect to the device via RS-232 using a DB9 connector on the front panel of the device or a 3-wire Phoenix connector on the back panel of the device. Either RS-232 port shall also be capable of sending and receiving messages from control systems such as those made by AMX and Crestron. The software interface shall enable all device settings and presets to be backed up and restored from a single computer file. The software interface shall enable password protection of all device settings. The software interface shall enable signal processing modules to be placed in a user-defined order, on either side of a matrix mixer that shall allow the signal from each input to be routed to either or both outputs. The following processing shall be available to each audio channel:

- 5-, 10-, and 16-band single-channel and stereo automatic feedback reduction (using Shure's patented adaptive notch filter algorithm) with the ability to restore a default configuration automatically after a user-specified number of hours (Auto Clear).
- Graphic equalization
- Parametric equalization with filter widths adjustable from 1/70th to 4 octaves
- Cut/shelf equalization. Shelf filters shall have selectable slopes between 6 dB and 12 dB per octave and shall allow 18 dB of boost or cut. Slopes in the cut filters shall be selectable between 6, 12, 18, and 24 dB per octave and shall be selectable between Butterworth, Bessel, and Linkwitz-Riley.
- Delay. 10 seconds shall be available in the device.
- 2-way crossover with independently adjustable slopes. Slopes shall be selectable between 6, 12, 18, and 24 dB per octave and shall be selectable between Butterworth, Bessel, and Linkwitz-Riley.
- Single-channel and stereo compression and limiting
- Gating and downward expansion
- Automatic gain control
- Ducking

Without connecting the software interface, the device shall function as a two channel feedback reducer with controls for bypassing, locking, clearing, and engaging Auto Clear for each channel's feedback reducer. The front panel shall display an LED for each feedback filter. The device shall be pre-configured with presets to provide two independent channels of feedback reduction, to function as a stereo feedback reducer, and to provide dual mono split operation.

The device shall be capable of storing 16 presets in its flash memory. The front panel of the device shall have a two digit display indicating the preset number that is active. The front panel shall also have controls for selecting and loading presets. Users shall be able to disable the front panel controls. The front panel shall also provide signal, clip and mute indicators using LEDs for each input and output. The back panel shall provide input and output connectors to enable communication with other Shure products via Shure Link. Four control input pins on the back panel shall enable remote volume, mute, and preset controls to be configured using contact closures, potentiometers, and Shure's DRS-10 remote preset selector.

The device shall be Shure's DFR22 Audio Processor with Feedback Reduction.



SHURE Incorporated Web Address: <http://www.shure.com>
5800 W. Touhy Avenue, Niles, IL 60714-4608, U.S.A.
Phone: 847-600-2000 Fax: 847-866-2279
In Europe, Phone: 49-7131-72140 Fax: 49-7131-721414
In Asia, Phone: 852-2893-4290 Fax: 852-2893-4055
Elsewhere, Phone: 847-600-2000 Fax: 847-866-2585