**SOFTWARE SPECIFICATIONS**

**HARDWARE SPECIFICATIONS**

**DFR22 Audio Processor with Feedback Reduction**

### Frequency Response
20 Hz to 20 kHz +/- 1 dB

### Dynamic Range
110 dB minimum, A-weighted, 20 Hz to 20 kHz

### Sampling Rate
48 kHz

### Digital-to-Analog, Analog-to-Digital Conversion
24 bit

### Impedance
- Input: 10 kΩ
- Output: 120 Ω

### Input Clipping Level
- +24 dBu minimum

### Output Clipping Level
- +24 dBu
- +12 dBu (with 12 dB pad)
- +6 dBu (with 18 dB pad)

### Total Harmonic Distortion
< 0.05%, +4 dBu, 20 Hz to 20 kHz

### Propagation Delay from Input to Output
< 1.5 ms. Processing blocks add no latency.

### Polarity
Input to output: non-inverting (inverting optional)

### Operating Voltage
100-240 Vac, 50/60 Hz (auto-switching), 1 A maximum

### Maximum Power Drain
45W

### Temperature Range
- Operating: -7º to 49º C (19º to 120º F)
- Storage: -29º to 74º C (-20º to 165º F)

### Dimensions
19 in x 10 in x 1 3/4 in

### Weight
2.83 kg (6.25 lbs)

### Furnished Accessories
- Power Cable
- 5-pin DIN Shure Link Cable
- Hardware Kit
- 5 Block Connector Terminals, 3-pin (for audio inputs and outputs, RS-232)
- 1 Block Connector Terminal, 6-pin (for control inputs)
- 4 Rackmount Screws and Washers

### Optional Accessories
- DRS-10 Wallplate unit with 10-position rotary switch for preset control

### Automatic Feedback Reduction
5-, 10- and 16-filter single-channel and stereo modules
- Frequency resolution: 0.1 Hz
- Filter widths: 1/10 to 1/70 octave
- Filter depths: up to 18 dB

### Dynamic Processing
Compressor/Limiter
- Versions Available: Soft/Hard Knee, Stereo, & Peak Stop (look ahead) Limiter
- Attack: 1 ms to 200 ms, 0 ms for Peak Stop Limiter
- Decay: 50 ms to 1000 ms
- Ratio: 1:1 to Infinity

Gate and Downward Expander
- Attack: 1 ms to 1 second
- Decay: 50 ms to 1000 ms
- Gate Hold Time: 3 to 500 ms
- Ratio: 1:1 to Infinity

### Automatic Gain Control
- Attack: 200 ms to 3 seconds
- Decay: 500 ms to 5 seconds
- Ratio: 1:1 to 10:1
- Maximum Boost: 12 dB

### Ducker
- Attack: 1 ms to 5 seconds
- Hold: 1 ms to 10 seconds
- Release: 1 ms to 10 seconds
- Attenuation: 0-12 dB

### Matrix Mixer
- Route any input to any output
- Independently adjustable crosspoint gain, muting and polarity

### Eq & Shelving
Graphic Equalizers
- 10 and 30 band modules. Combining and Non-combining.
- Up to 12dB boost, 16dB cut

Parametric Equalizers
- Available in modules with 2, 5, 7, & 10 filters, plus cut/shelf filters
- Bandwidth: 1/20 to 4 octaves
- Up to 16 dB boost and 16 dB cut per filter

Cut/Shelf Equalizer
- High or Low cut: 6, 12, 18, 24 dB/octave slopes
- Shelving: Butterworth, Bessel, and Linkwitz-Riley

### Delay
- Up to 2 seconds per delay block
- 10 seconds total of available delay memory
- 20 microsecond resolution

### Splitters
- 2-way splitter

### Crossovers and Splitters
- 2-way crossover and subwoofer modules
- Independently adjustable slopes
- Butterworth, Bessel, and Linkwitz-Riley up to 24 dB/octave
- Adjustable polarity, muting and gain (+/-12 dB) per output

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**www.shure.com**
Shure’s DFR has quickly become the industry standard for effective feedback reduction. The DFR22 builds on that reputation to provide an affordable full-featured 2x2 audio processor with Shure’s drag-and-drop software. It’s much more than feedback reduction. For many jobs, it’s the only audio processor you’ll need.

The Shure DFR Difference.
Featuring enhancements to Shure’s patented Adaptive Notch Filter Algorithm, the DFR22 includes single-channel and stereo processing blocks with up to 16 precision notch filters that automatically seek out and reduce feedback. With widths between 1/10 and 1/70 of an octave, these adaptive filters affect only the problem frequencies, maximizing system stability and sound integrity. In addition, Auto Clear mode removes dynamic filters and restores the DFR to your ideal-tuned configuration after a specified amount of time.

Processing blocks in the DFR22 can be applied in any order, to any input or output. You can also link processors for more efficient global control. Copy and paste processing blocks to any input or output to duplicate processors across multiple channels.

With the DFR22, you can design the entire system, save it to disk, and load it at the job site for easy setup. The DFR22 also allows real-time design changes, so you can add, subtract, or change processing blocks as you tune the system. It makes setup a breeze. And ensures that you get the best possible customized processor for your application. Frequency response and signal levels can be visually monitored in real time as parameters are adjusted.

Contact your dealer to experience Soundplex®: Smart DSP from Shure.

Two Channels. A Powerful Processor.
Shure’s DFR has quickly become the industry standard for effective feedback reduction. The DFR22 builds on that reputation to provide an affordable full-featured 2x2 audio processor with Shure’s drag-and-drop software. It’s much more than feedback reduction. For many jobs, it’s the only audio processor you’ll need.

The DFR22 has all of the DSP processing you need to ensure the highest quality audio.

Processors include:
- DFR Automatic Feedback Reducers
- Parametric and Graphic Equalizers
- Cut/Shelf Equalizer
- Compressors/Limiters
- Automatic Gain Control
- Gate/Downward Expander
- Ducker
- 2-Way Crossover
- Subwoofer Processor
- Splitter
- Delay Processors
- 2x2 Matrix Mixer
- 2-Way Crossover
- Subwoofer Processor
- Splitter
- Delay Processors
- 2x2 Matrix Mixer

The DFR22 has all of the DSP processing you need to ensure the highest quality audio.

How DFR22 Processes a Stereo Main Mix.
How DFR22 Functions as an Insert Processor.
How DFR22 Functions as a Monitor Processor.

Full-Featured Processing Power.
How DFR22 Functions as an Insert Processor.
How DFR22 Functions as a Monitor Processor.

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