OPAL Series DPR-422

Dual Compressor / De-Esser

The **DPR-422**, based on BSS Audio's classic DPR-402, provides two channels of high-quality compression and de-essing. Proprietary design techniques make it different from other compressors.

SUBTRACTIVE COMPRESSION, a unique internal architecture, eliminates the distortion, noise and unwanted side-effects found in conventional compressors. This not only ensures a cleaner, purer signal, but forms the basis of entirely new possibilities in signal processing.

Each channel includes a variable ratio compressor featuring BSS's established progressive knee characteristic. This gives soft-knee, over-easy musicality at low ratios, varying gradually towards dependable hard-limiter precision at the maximum setting.

Very few compressors offer a de-essing function, yet the need to remove sibilance from vocals or the rasp from a saxophone is a common one. The **DPR-422** provides two sophisticated de-essing facilities, unequalled by any other unit in its class.

Broadband de-essing adds to normal compressor performance the ability to compress the whole signal when HF signals exceed the preset de-ess threshold level.

HF-only de-essing, the other mode, uses all the compressor control circuitry to create a dedicated, frequency-selective de-esser which compresses high frequency signals while leaving low frequency content unmodified.

Such high-precision de-essing has already been a "life-saver" in film and video post-production.

To help you concentrate on the mix without worrying about the complexities of attack & release characteristics, the 422 provides an **AUTO** mode. This mode analyses the program material and automatically sets the dynamic time constants to suit the material being processed. The **AUTO** mode is very forgiving, and can be used on most program sources.

Clear and informative metering means that you have constant visual indication of the signal level relative to the threshold, and of the degree of gain reduction. A separate meter shows output (or input) level.

To use the **DPR-422** on a stereo program source, just press the STEREO LINK switch. This allows you to adjust both channels from the controls on Channel 1.

Inputs and outputs are fully balanced, with the ability to switch between +4dBu or -10dBV operating levels. Additionally, side-chain inserts are balanced.

Compressor Section

Threshold
Sets the threshold of the compressor. Signal level relative to threshold, and gain reduction, are shown simultaneously on the led meter above.

Ratio
Changes the amount of gain reduction applied to signals above the threshold. A **RATIO** of 1:1 gives no compression, an infinite ratio cuts off all increase above the threshold level.

Attack
The **ATTACK** control determines how quickly the compressor reacts to increases in signal level.

Release
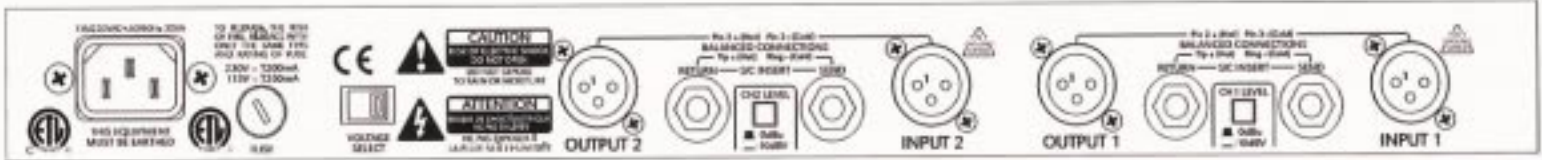The **RELEASE** control governs how fast the compressor recovers after the signal drops below threshold.

Auto switch
Sets Attack and Release times automatically, depending on the program material.

DPR
422

Two comprehensive compressors and precision de-essers, with the quality that only BSS Audio can provide and a price that you'll appreciate.

Features include
- **Subtractive Compression**
- **Control of Attack & Release**
- **Frequency-selective compression**
- **Precision De-Essing**

BSS Audio

Gain Control and Output meter

Allows gain make-up when compression inevitably changes program levels, continuously monitored by the **OUTPUT LEVEL** meter. **METER INPUT** measures the input signal of the 422, allowing instant comparison of input and output levels for accurate gain setting.

De-Esser Section

Sets the sensitivity at which de-essing occurs in response to HF signals. Green and red LED's show when and how hard the de-esser is working.

Frequency

In **Broadband De-Ess** mode, sets the frequency which triggers the compressor.

In **De-Ess HF** mode, sets the frequency only above which de-essing/compression will occur.

Side Chain Listen switch

Pressing this lets you hear the effect on the signal of any filters in the control side chain, This allows you to quickly and accurately set the compressor controls for optimum results.

Bypass Switch

Inserts the compressor into circuit. When out, the unit is relay-bypassed.

The benefits of invisible compression, precision de-essing and creative application will be appreciated by engineers in touring sound, corporate production fixed installations and recording. Knowing that the audio performance is uncomprised makes it the obvious choice.

Also in the OPAL Series:

DPR-944
2+2 Parametric Compressor / Gate

DPR-522
Advanced Dual

Technical Specifications

Input Impedance	10kOhm, electronically balanced
Maximum Input Level	+20dBu
CMRR	<-50dB (30Hz-20kHz)
Input Connector	XLR-3F or equivalent
	Pin 1 Floating (no connection)
	Pin 2 Signal +ve (Hot)
	Pin 3 Signal -ve (Cold)
Output Impedance	<50 Ohms, electronically balanced
Maximum Output Level	+20dBu into 600 Ohms or greater
Output Gain	+/-20dB, variable
Output Connector	XLR-3M or equivalent
	Pin 1 Ground
	Pin 2 Signal +ve (Hot)
	Pin 3 Signal -ve (Cold)
Side Chain Inserts	Send: Ground-sensing quasi-balanced
	Return: Electronically balanced
Side Chain Insert	1/4" Jack
	Tip: Signal +ve (Hot)
	Ring: Signal -ve (Cold)
	Sleeve: Ground
Threshold range	-30dB to 20dB, continuously variable
Compression ratio	1:1 to Infinity:1, continuously variable
Maximum VCA range	>30dB
Distortion	Typically <0.05% at 2kHz,
	0dBu, 6dB gain reduction, AUTO mode
Attack time	50 microseconds - 100 milliseconds,
	continuously variable
Release time	5 milliseconds - 2 seconds,
	continuously variable
Auto Time Constant	Three part program-dependant time
	constant - Attack time typically 200
	microseconds, Release 10 milliseconds
De-Esser	
Threshold range	-30dB to 20dB, continuously variable
Ratio	Infinite, at and above 2x the frequency
Frequency range	1kHz - 10kHz, continuously variable
General Performance	
Frequency Response	20Hz - 20kHz (+/- 0.25dB)
Output Noise	-96dBu (22Hz to 20kHz)
Dynamic range	117dB
Crosstalk	<-85dB (20Hz to 20kHz)
Distortion (THD)	<0.005% (80kHz measurement
	bandwidth) 20H-20kHz.
	Typically 0.002% at 1kHz, unity gain,
	+10dBu output below threshold
General	
Dimensions	19"x1.75"x7.1"
	(483mmx45mmx180mm)
Weight	6.6lbs (3kgs), unpacked
AC Power	115/230V AC, 50/60 Hz, 30VA.