

900

dbx® *PROFESSIONAL PRODUCTS*

MODULAR SERIES

A Harman International Company
8760 S. Sandy Pkwy.
Sandy, Utah 84070
Phone (801) 568-7660
Fax (801) 568-7662
Int'l Phone (219) 462-0938
Int'l Fax (219) 462-4596
customer@dbxpro.com
<http://www.dbxpro.com>

The 900 Series is a modular signal processing system that eliminates redundant packaging, saves rack space and provides exceptional flexibility and serviceability. The F900A mainframe can accommodate up to 9 modules, and the FS900 miniframe can accommodate one or two modules mounted horizontally. Some of the many applications of the 900 series products include: music production and sound reinforcement, TV and radio production, mobile and theatrical production and disc mastering.

F900A

900 SERIES MAINFRAME



The F900A is the foundation for creating a customized "audio toolbox." It holds up to 9 dbx 900 series modules in a 3U rack space. Standard barrier strips provide access to all input and output connections. To ensure reliability and consistent performance under the most demanding conditions, all internal connections to modules are made via double-sided, gold, bifurcated contacts.

Specifications:

Power Requirements: 90-130 VAC, or (as ordered) 200-250 VAC; 50/60 Hz, 100 W
DC Regulated Output: ± 15 V at 1.0 A; ± 24 V at 0.5 A
Weight: 17 lbs. (7.7 Kg)
Shipping Weight: 24 lbs. (10.9 Kg)
Dimensions: 5 1/4" (13.3 cm) H x 19" (48.3 cm) W x 13" (33 cm) D

FS900

900 SERIES MINIFRAME

The compact, cost-effective version of the F900A, the FS900 Miniframe accommodates two 900 series modules in a 1U rack space. XLR connectors are provided for all input and output connections. The unit is built to the same exacting standards as the F900A.

Specifications:

Power Requirements: 90-130 VAC, or (as ordered) 200-250 VAC; 50/60 Hz, 100 W
DC Regulated Output: ± 5 V at 1.0 A; ± 24 V at 0.5 A
Weight: 8 lbs. (3.6 Kg)
Shipping Weight: 13 lbs. (5.9 Kg)
Dimensions: 1 3/4" (4.5 cm) H x 19" (48.3 cm) W x 13" (33 cm) D

902 DE-ESSER

The industry standard 902 de-esser's unique features make it possible to achieve the desired amount of de-essing, regardless of variations in signal level.

Using patented dbx® sibilance detection circuitry, the 902 compares the RMS energy of signals above and below a specified crossover point to precisely detect undesirable sibilance.

Features:

- Gain reduction adjustable from 0 to -20 dB
- Two gain reduction modes (Broadband and HF Only)
- No need to set a threshold for de-essing
- Two 902 modules may be strapped together for stereo operation
- Hardwire bypass switch

Specifications:

Frequency Response: 20 Hz - 20 kHz, ±0.5 dB
 Input: Balanced: 25 kΩ
 Unbalanced: 18.5 kΩ
 Maximum Input Level: +24 dBu
 Output: Unbalanced: 22 Ω
 Maximum Output Level: +24 dBu into 600 Ω
 THD: <0.02% @1 kHz
 Dynamic Range: 106 dB
 Controls: De-esser in/out Switch, HF Mode Switch, Frequency Adjust Knob, Range Adjust Knob
 Indicators: Input: Red, HF Only: Red
 Metering: 10 Segment LED bargraph indicating Gain Reduction



Equivalent to the stand-alone dbx 160XT, the 903's features make it possible to achieve large amounts of compression without undesirable side effects. The 903 uses patented, true RMS detection to provide audibly superior compression and limiting.

The 903 also uses dbx's patented OverEasy® soft-knee threshold for a smooth onset of compression.

Rear panel access to the the RMS detector allows the compressor to be triggered by signals other than the audio input. Negative compression ratios are also available for special effects.

Features:

- Two or more 903 modules may be strapped together for stereo or multichannel operation
- Continuously variable compression ratio from 1:1 through ∞:1 to -1:1
- Infinity+™ (Negative) compression
- Expanded scale LED metering
- External detector input
- Hardwire bypass switch

Specifications:

Frequency Response: 20 Hz - 20 kHz, ±0.5 dB
 Input: Balanced: 25 kΩ
 Unbalanced: 18.5 kΩ
 Maximum Input Level: +24 dBu
 Output: Unbalanced: 22 Ω
 Maximum Output Level: +24 dBu into 600 Ω
 THD: <0.02% @1 kHz, With any amount of compression
 Dynamic Range: 112 dB
 Compression Ratio: 1:1 through ∞:1 to -1:1
 Controls: In/out Switch, Threshold Knob, Ratio Knob, Output Adjust Knob
 Indicators: Input: Red, Infinity+™ Compression: Red
 Metering: 10 Segment LED bargraph indicating Gain Reduction
 Compression Characteristic: OverEasy®

904 GATE

The 904 is an expander gate using dbx's OverEasy® action for a smooth onset of gating. Attenuation limit, attack and release rates and threshold are all adjustable. This popular gate also features Programmed Latch Mode which mutes a channel until an above threshold signal is present. It then latches open until reset.

The 904 is a very fast voltage controlled below threshold downward expander. It senses the level of an input or keying signal and determines whether the level is below threshold. If it is, the signal gets attenuated; if not it passes at unity (0 dB) gain. The amount of signal attenuation is a function of its own level and the 904's Attenuation, Limit, Ratio, and Threshold settings.

Features:

- Two modules can be strapped together for stereo operation
- Key input for frequency-tailored gating or gating of one instrument by another
- adjustable 0 to 60 dB attenuation

- Programmed latch mode
- Variable attack and release times
- Hardwire bypass switch

Specifications:

Frequency Response: 20 Hz - 20 kHz, ±0.5 dB
 Input: Balanced: 25 kΩ
 Unbalanced: 18.5 kΩ
 Maximum Input Level: +24 dBu
 Output: Unbalanced: 22 Ω
 Maximum Output Level: +24 dBu into 600 Ω
 THD: <0.02% @1 kHz
 Dynamic Range: 106 dB
 Threshold Range: -40 - +10 dBu, Variable
 Controls: KEY Mode Switch, PLM Switch, Gate In Switch, Attenuation Limit Knob, Attack/Release Knob, Threshold Knob, Ratio Knob
 Input: Red, PLM: Green, Key: Red
 Indicators: 10 segment LED bargraph indicating Gain Reduction
 Metering: 10 segment LED bargraph indicating Gain Reduction





929

HISS REDUCER™

The 929 provides two channels of single-ended noise reduction for use with analog tape recorders, multiple signal processors and noisy digital samplers and storage devices. The single Quieting control for each channel can be rapidly adjusted for the hiss characteristics of a particular system

The 929's patented circuitry gets rid of unwanted, steady-state hiss, but preserves those high frequencies that add definition to sound.

The 929 provides significant noise reduction for sources that have a steady noise floor. The 929 monitors the RMS energy in the hiss frequency band. If any fluctuating energy is detected, it immediately "opens up" as long as necessary to let the desired signal through.

Inputs on the 929 are balanced; outputs are unbalanced. Outputs can be changed to balanced operation by moving two jumpers. Each module contains two

independent channels that may be strapped for operation with noisy stereo sources.

Features:

- Stereo or dual mono operation
- Easily set for different program material
- Provides noise reduction in situations where Type I or Type II encoding cannot be used

Specifications:

Frequency Response:	20 Hz - 20 kHz, ±1 dB
Input:	Balanced: 30 kΩ Unbalanced: 18.5 kΩ
Maximum Input Level:	+24 dBu
Output:	Balanced: 44 Ω Unbalanced: 22 Ω
Maximum Output Level:	Balanced: +24 dBu into 600 Ω Unbalanced: +23 dBu into 600 Ω
THD:	<0.03%
Dynamic Range:	109 dB
Controls:	Hiss Reducer In/Out Switch, Stereo Couple Switch

905

THREE BAND PARAMETRIC EQUALIZER



The 905 provides flexible equalization in a compact, high density format without sacrificing true, fully parametric operation of all three filter bands.

The bands each offer control of frequency, bandwidth (Q) and up to 15 dB of cut or boost. Each of the filters can be independently switched from standard reciprocal operation to "infinite notch" mode by simply turning the cut/boost switch a click-stop past maximum cut.

For shelving applications, the 905's high and low bands can be switched from peak/dip to shelving operation at the front panel

Features:

- A/B comparisons available by switch bypass
- Peak/dip and switchable notch mode on each band
- Peak/shelf switching on high and low bands
- Overload sensing indicates clipping at any point in the circuit
- Infinite notch switch on each band

Specifications:

Frequency Response:	20 Hz - 20 kHz, ±0.5 dB
Input:	Balanced: 25 kΩ Unbalanced: 18.5 kΩ
Maximum Input Level:	+24 dBu
Output:	Unbalanced: 22 Ω
Maximum Output Level:	+24 dBu into 600 Ω
THD:	<0.03% @1 kHz, with any boost or cut
Dynamic Range:	112 dB
Controls:	Parametric EQ In/Out Switch, Symmetrical Shelving Switch (high and low); For Each Band: Frequency Center Adjustment Knob, Boost/Cut Knob, Q Adjustment Knob
Indicators:	Clip Light: Red, In/Out: Red, Gain: Red

911

TYPE I NOISE REDUCTION

The 911 incorporates one channel of encode and one channel of decode circuitry in the dbx Type I format. The Type I system doubles (up to a maximum of 115 dB) the dynamic range of the storage or transmission medium. This is achieved through compressing the signal by a 2:1 ratio during record then expanding the signal 1:2 with a precisely complementary deemphasis during playback. The companding is linear over a 100 dB range. It requires no pilot tones or special calibration.

Type I provides best results when used with transmission or storage media exhibiting flat frequency response (±1 dB 20 Hz - 20 kHz) - typically open reel recorders running at 15 or 30 ips, or digital media. The signal's dynamic range is cut in half, with the hottest levels considerably reduced and the softest passages boosted. On decoding, the signal is precisely expanded back, and the original dynamic range of the program is retrieved without hiss, saturation distortion, or degradation of frequency response.

Features:

- Industry standard Type I noise reduction
- Greater than 40 dB improvement in dynamic range for typical systems
- Front panel adjustable to match facility levels from -12 to +16 dBu
- Hardwire bypass switch

Specifications:

Frequency Response:	30 Hz - 20 kHz, ±1 dB; 20 Hz, -1 dB
Input:	Balanced: 75 kΩ Unbalanced: 50 kΩ
Maximum Input Level:	+23 dBu
Output:	Balanced: 44 Ω Unbalanced: 22 Ω
Maximum Output Level:	Balanced: +24 dBu into 600 Ω Unbalanced: +23 dBu into 600 Ω
THD:	<0.1% 100 Hz - 20 kHz; <0.5% below 100 Hz
Dynamic Range:	116 dB
Controls:	NR In/Out Switch, Record Switch, Play Switch





941A 942A

TYPE II NOISE REDUCTION

The 941A encoder and the 942A decode modules provide more than 40 dB of additional dynamic range for typical limited bandwidth media such as cart machines, telephone/PPT lines, videotape audio tracks and low bandwidth digital systems.

Patented RMS detection circuitry makes the system virtually immune to phase shift related tracking problems. The 941A incorporates two channels of Type II encoding, while the 942A incorporates two channels of Type II decoding. A typical application of multiple 942As is in the on air studio where outputs of multiple decks are decoded.

Calibration trims are accessible at the front panel to allow readjustment to custom studio levels.

Features:

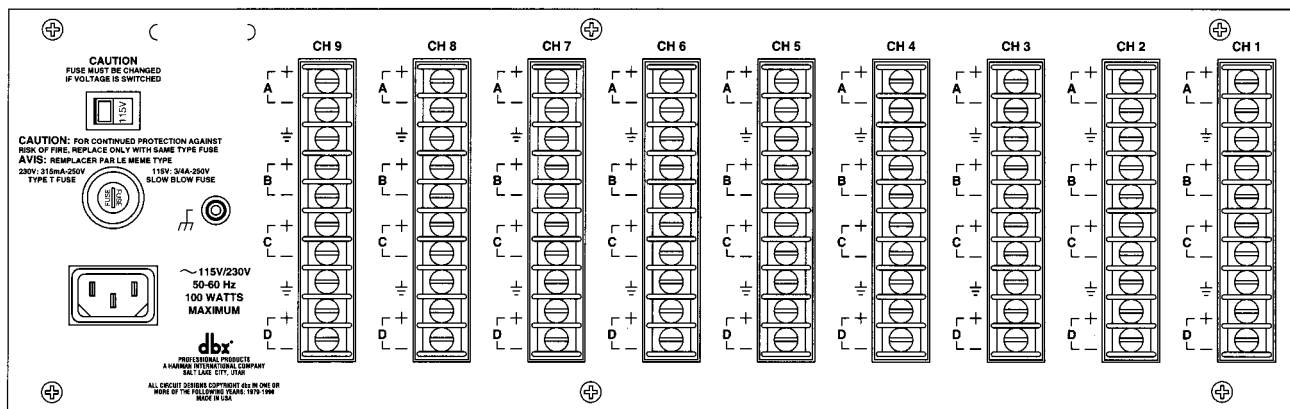
- Separate encode and decode modules for production and on air rooms
- Provides greater than 40 dB improvement in dynamic range for typical systems
- Front panel adjustable to match facility
- Hardwire bypass on all inputs and outputs

Specifications:

Frequency Response:	40 Hz - 20 kHz, ± 0.5 dB; 30 Hz, -2 dB
Input:	Balanced: 75 k Ω Unbalanced: 50 k Ω
Maximum Input Level:	+23 dBu
Output:	Balanced: 44 Ω Unbalanced: 22 Ω
Maximum Output Level:	Balanced: +24 dBu into 600 Ω Unbalanced: +23 dBu into 600 Ω
THD:	<0.1% 100 Hz - 20 kHz; <0.5% below 100 Hz
Dynamic Range:	116 dB
Controls:	Decode In/Out Switch

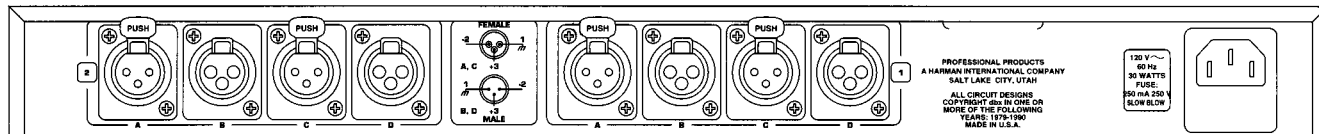
F900A

900 SERIES MAINFRAME BACK PANEL



FS900

900 SERIES MINIFRAME BACK PANEL



dbx[®]
PROFESSIONAL PRODUCTS

dbx[®] PROFESSIONAL PRODUCTS
A Harman International Company
8760 S. Sandy Pkwy.
Sandy, Utah 84070
Phone (801) 568-7660
Fax (801) 568-7662
Int'l Phone (219) 462-0938
Int'l Fax (219) 462-4596
customer@dbxpro.com
http://www.dbxpro.com