dbx

IF YOU'RE DETERMINED TO ACHIEVE ABSOLUTE PERFORMANCE FROM YOUR SYSTEM, READ ON.

CATALOG/CRC 9375924

5BX-DS

Dynamic-Range Controller

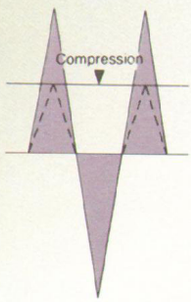
The 5BX-DS is a dynamic-range controller that not only lets you expand the dynamic range, but also compress it, giving you more comprehensive sonic control.

First, the 5BX-DS lets you perform downward expansion. This reduces gain variably below the threshold set by the transition level. At full expansion, the dynamic range of the program is increased by 50 percent over that of the original without affecting signals above the threshold. Operating like a "noise gate," this process cuts various types of noise such as tape hiss, rumble, record surface noise and hum.

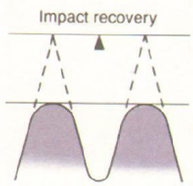
Upward compression reduces gain variably above the threshold set by the transition level. At full compression, the dynamic range of the program material is completely suppressed; in other words, the compressor operates as a peak limiter. Intermediate compression can also be performed using intermediate settings, of course. Using upward compression, you can take the wide dynamic range of CDs for dubbing onto tape, or subdue the dynamics to create a sound that's just right for background music. Thanks to our famous "OverEasy" (gradual-onset) circuits, the compression and expansion responses are curved slightly at transition thresholds to provide a more natural sound.

Another important effect is impact recovery. Simply put, it adds punch to the sudden transients in music by emphasizing their level by up to 10dB. So the snappy attack at the beginning of a snare drumbeat is reproduced with fully recovered impact to infuse more life and excitement into the music. You'll enjoy the benefits of the dbx impact recoverer, because with any recording, analog or digital, high-level attacks are suppressed to some degree due to the limitations of recording/mastering equipment and to the practice by recording engineers and mixers of recording at the highest possible level. The dbx impact recovery circuit simply restores lost impact for you to enjoy. And for clear, natural sound, you can adjust the degree of impact, band by band, in five ranges (Ultra Low, Low, Mid, High and Ultra High).

In addition to these incredible dynamic-range control capabilities, the 5BX-DS Dynamic-Range Controller has a lot more to offer. You can store up to five responses, each combining the desired parameters for dynamic-range control (expansion or compression) and impact recovery. This means you can preset the optimum dynamic-controller settings for jazz, classics or any kind of music you like. There's a battery backup system that retains preset



Upward compression
The upward compressor works only on loud sounds, a good way to shrink the dynamic range to create background music or when making headphone stereo or car cassettes.

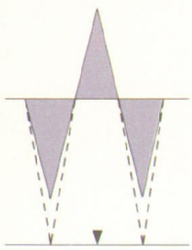


Impact recovery
Transient attacks, often lost during recording and mastering, are recovered to add punch and bite to sound.

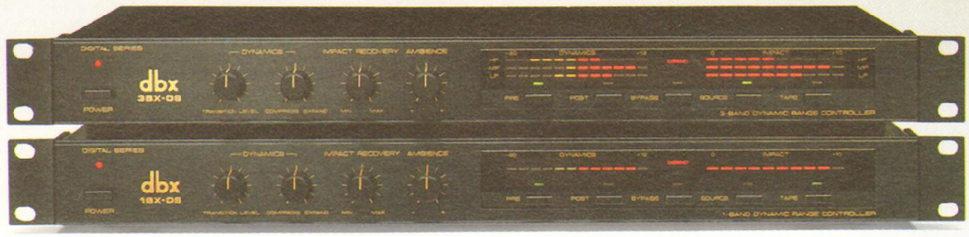
dbx gives you a total control over dynamic range—expanding or compressing it

settings even while the unit's power is off.

To facilitate operation, a large LED display shows the degree of dynamics and impact recovery at each of five frequency bands at any moment. You can "freeze" the indication for a choser look. And you can operate the unit from a full-function wireless remote control.



Downward expansion
By making soft sound still softer, downward expansion reduces noise, rumble, hum and other undesirables to make them inaudible. The downward expander is a "noise gate" through which only the music is allowed to pass.



CATALOG/STOCK/CRC 9375338

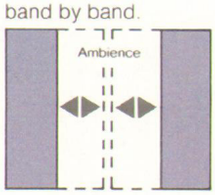
3BX-DS
Dynamic-Range Controller

The 3BX-DS is four dbx processors in one. The dbx dynamic-range expander increases overall dynamic range for more powerful music. The "OverEasy" dbx dynamic-range compressor trims the overall dynamic range—useful when dubbing CDs onto tapes or for background music listening. The 3-band expansion/compression ensures natural sound by processing the signal band by band, while the transition levels can be fine adjusted for high- and low-frequency bands independently. The dbx impact recoverer gives back the explosive impact lost in the recording or mastering process. And the dbx ambience controller takes away the "edge" sometimes heard in digital sound, as well as trims the width of a "sound stage." dbx's 3BX-DS—for complete control over your sound.

CATALOG/STOCK/CRC 9349119

1BX-DS
Dynamic-Range Controller

Here's an affordable four-in-one dynamic-range controller, the 1BX-DS. It has every feature the 3BX-DS does: the dynamic-range expander, dynamic-range compressor, impact recoverer and ambience controller. The only difference is that its expander and compressor work on all frequencies rather than dividing them into three bands and operating band by band.



Ambience controller
This feature lets you select the amount of separation—from wide to narrow. Used for CD playback, it removes the sharp "edge" that many audiophiles perceive.

The 120X-DS gives you a new kind of depth perception

CATALOG/STOCK/CRC 9374422

120X-DS
Subharmonic Synthesizer

Ever wondered what happens to that deep bass that you can feel as well as hear? The dbx 120X-DS lets you get it back. Our subharmonic synthesizer samples all bass frequencies between 54Hz and 110Hz and synthesizes corresponding frequencies exactly one octave lower—frequencies down to 27Hz! Your music takes on new life and a new sense of power. Moreover, the 120X-DS provides controls for adjusting levels at four different frequency ranges, so you can add all the subharmonics you want. You can also use the 120X-DS as an electronic low-pass filter for a subwoofer in a 3-D system: there's a control to adjust the crossover frequency for well-balanced sound.

Hiss-free tape sound for golden silences and explosive crescendos

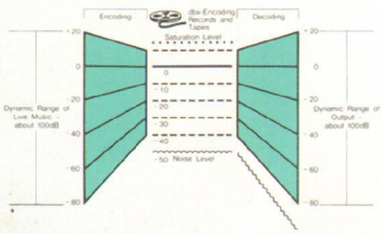
CATALOG/CRC 9374539

224X-DS
TypeII Noise-Reduction System

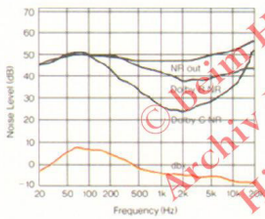
The dbx 224X-DS lets you fit a digital program's dynamic range of 90dB or more comfortably on cassette tape, a medium that can only accommodate 60dB at most, and enjoy exciting wide-range playback from every tape. How does it work?

The key is in compressing the dynamic range at a linear ratio of 2:1 during recording, and expanding it back at a ratio of 1:2 ratio during playback. This cuts noise by as much as 40dB across the audible range. Couple it with increased saturation level for the tape, and the result is that you have cassette or open-reel tape recordings rivaling Compact Discs in terms of dynamic range!

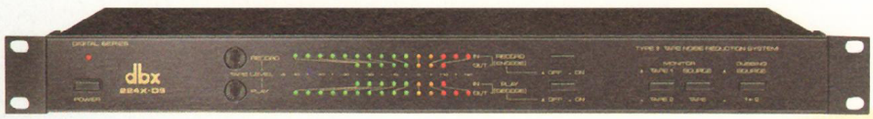
Conventional noise-reduction systems reduce tape hiss at certain frequencies, but dbx virtually eliminates it from the entire audible frequency range. The 224X-DS contains two noise-reduction circuits so that you can monitor the decoded sound on a 3-head deck as you make recording. Connecting two tape decks, you can encode a signal as you record or dub tapes. And dbx is free of the level-matching problems of other noise-reduction systems.



Record/Playback Process for dbx Encoding/Decoding



Reduction of Noise by Three NR Systems



CATALOG/CRC 9779000

CA-1
Car Decoder

The CA-1 decodes dbx-encoded tapes at a precise 1:2 linear expansion ratio, letting you enjoy the full dynamic range of live performances or recorded Compact Discs—right in your car—with not a hint of hiss.

Knowing many car stereos have no noise reduction facilities whatsoever, we've added a second position called dbx Type B, so that you'll enjoy good results with cassettes encoded by Dolby* B noise reduction system. The CA-1 has handy bass and treble tone controls to help you adjust taped sound more to your taste.

The CA-1 easily connects with all car stereos with separate cassette player and power amplifier, or outboard graphic equalizers. (Note that it cannot be used with all-in-one car stereos that combine cassette decks, tuners and amps.)

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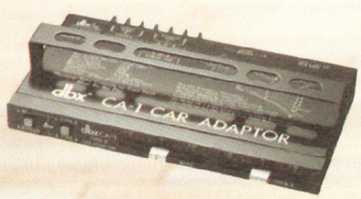

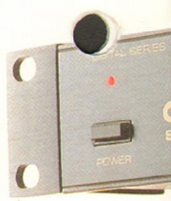

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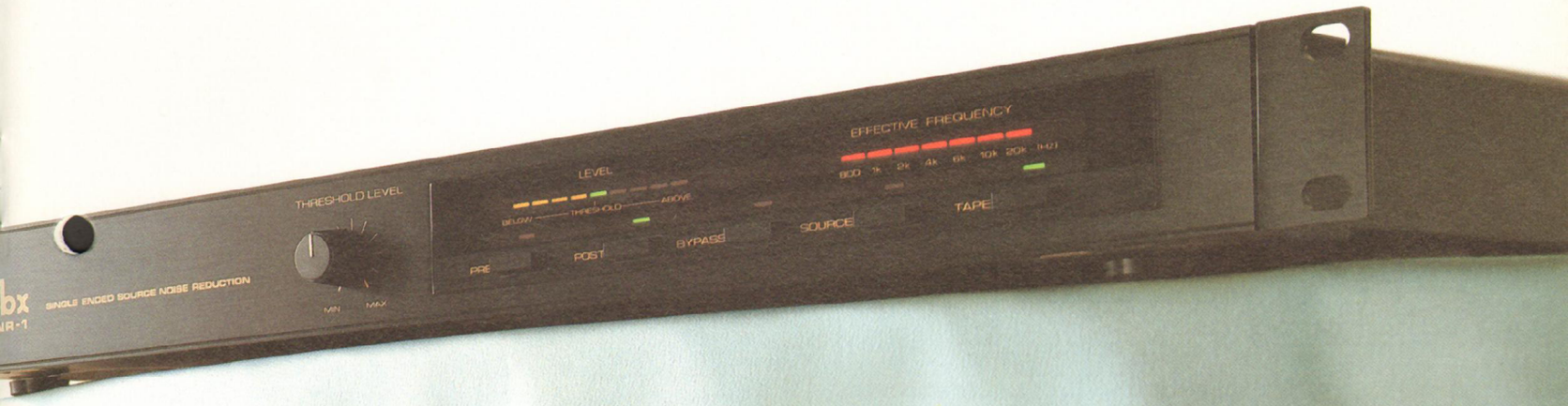


re for ailing sound—the ultimate hiss-remover from dbx

CATALOG/STOCK/CRC 9387002

SNR-1

Single-Ended
Noise Reduction Unit

Here's a new noise reduction system that will usher in the new age in noise reduction: it reduces hiss noise from program sources by from 20dB to 40dB, whatever the source may be—records, tapes, Compact Discs, VCR sound, TV sound, whatever.

What do you *not* hear? Hissy and muffled sound from audio and video tapes. Persistent surface noise from worn records or poor pressings. High-frequency noise from weak-signal FM broadcasts. Constant high-frequency noise heard in Compact Discs mastered from old recordings. The silence the dbx SNR-1 provides is total.

The SNR-1 is not a two-way "closed" system, one that requires you to encode a signal and decode it later to enjoy the proper noise-reduction effect. It's a one-way "single-ended" system: it requires no prior encoding so that the system is exceptionally easy to use.

How did we do it? The secret is the variable-frequency signal-pass device. When there's no music, it simply eliminates high-frequency noise—surface noise, tape hiss, background noise, etc.—to treat you to total silence. But when there's music, the device dynamically varies the cut-off frequency according to the level of high-frequency energy contained in the music. So it will never eliminate vital high-frequency musical information, nor will it affect the overall dynamics of the music.

Moreover, a variable-threshold level control lets you adjust the threshold level, program source by program source; you can apply noise reduction as you like. This ensures you enjoy most natural sound at all times.

Improving the operating convenience are LED meters to indicate the variable cut-off frequency and the effective input level with respect to the threshold level setting; pre/post and bypass switches; and a source/tape monitor switch.

Giving a new life to music that's lifeless—that's what the dbx SNR-1 is all about.

CATALOG/CRC 9357336

14/10
Computerized Equalizer/Analyzer

The dbx 14/10 comprises four components that together make equalization simple and accurate—a *14-band graphic equalizer*, a *real-time analyzer*, a *precision pink-noise generator with a calibrated mic*, and a *CPU microcomputer*.

You probably have heard how well equalizers work in bringing dramatic improvements to the sound of hi-fi systems. These benefits, however, are lost if you are forced to rely on an inaccurate frequency measuring apparatus: the human ear. Our computer-controlled 14/10 lets you enjoy all the benefits of accurate equalization thanks to a number of technological advances.

The 14/10 offers fourteen center frequencies to control: there is one frequency control for each octave above 500Hz, but below that frequency, there's one for each half octave, to give you more control over that critical frequency range. The "Q" of each filter is constant in order to keep interference to a minimum.

The 14-band automatic real-time spectrum analyzer of the 14/10 features the precision of professional measuring equipment. It gives you a continuous readout of the volume levels at all frequency bands: you can actually watch the music as you listen. Sensitivity is automatically adjusted for easy reading at any level, while the selectable response speeds let the analyzer respond like a VU meter or a peak meter.

The 14/10 comes with a pink-noise generator and a precision microphone individually calibrated at factory and supplied with the unit. Combine them with computer operation, and you can automatically equalize the room with top accuracy. To do so, place the microphone at the listening position, turn on the pink-noise generator, and press the AUTO EQ button. Within 15 seconds (on the average), the 14/10 will equalize that location with accuracy that only a computer can provide. For accuracy, the computer repeats the measure-and-equalize process over and over until the response is as flat as technically possible.

The 14/10 has another computer-controlled feature: in ten memory banks you can store not only room equalizations but also your own personalized equalization curves. For convenience, you can also automatically average a number of equalization curves stored in the memory banks for the best tonal balance over a wide listening area. Of course, you can record an equalized source to make tapes that will sound crisp and balanced in the car or on headphone stereos.

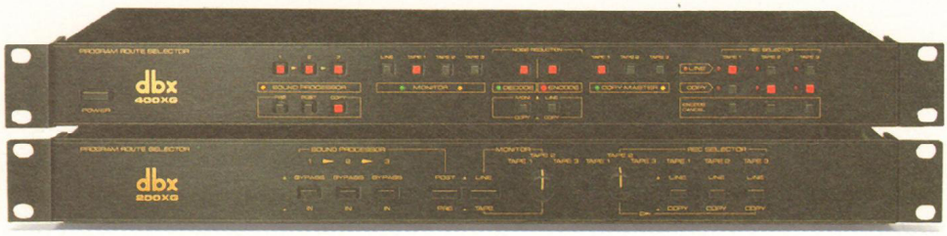
Moreover, the 14/10 provides a digital sound-level indicator, showing a continuous measure of the total volume level of your music in digits. There is an HFR (High-Frequency Rolloff) CURVE control that softens high-frequency response to recreate the acoustics of a concert hall. And precision electronic switches permit smooth manual equalization, channel by channel or both channels simultaneously.

Equalizing the sound the dbx way—with precision and convenience

CATALOG/CRC 9359415

2015G
Graphic Equalizer

Most graphic equalizers are octave equalizers, that is, they have controls arranged at one-octave intervals. But with our 2015G 15-band equalizer, we've provided one-half octave equalization in the most critical low-frequency range, while normal octave equalization is retained at the less critical high end. This arrangement lets you correct just about any sound problems caused by odd room acoustics, non-flat speaker response or inadequate source material. For versatility, each frequency can be adjusted over a ±12dB range or a finer ±6dB range, channel by channel. Other features include attenuators for each channel, pre/post/bypass switches, LED indicators for all switches, rack-mount design, and superb specifications for professional applications.



CATALOG/STOCK/CRC 9363706

400XG
Program Route Selector

The 400XG solves all your audio hookup problems in a single stroke. It has inputs for as many as three decks (or CD players), three sound processors, and a noise-reduction unit. With pushbutton ease, you can select the processor of your choice, the deck (or CD) of your choice, and add noise reduction.

In addition, the 400XG lets you produce from an un-encoded tape an encoded copy that incorporates any combination of noise reduction and sound processing of your choice. In the same way, an NR-encoded music tape can be made into a non-encoded copy that incorporates any combination of sound processing you choose.

200XG
Program Route Selector

Sound processors are essential to fully enjoy today's music, especially digital music, but hooking them all up can be a problem.

No longer. The dbx 200XG Program-Route Selector solves connection problems. The unit lets you easily hook together as many as three decks (or CD players), three sound processors, and a noise reduction unit—all through a single tape-monitor loop of your amp, preamp or receiver.

You can dub tapes between three decks, and the pre/post switch lets you add processing before or after recording (but not dubbing).

Giving order and organization to your integrated audio/video

CATALOG/STOCK/CRC 9388802

500XR
Audio/Video Program Route Selector

The 500XR lets you end connection problems, problems that you have had to live with if you own a number of audio and video components. Not only does it give streamlined organization to your audio/video setup, it also adds versatility and flexibility to your home entertainment system. And it's ultra-convenient: all switching and selection can be done from the full-function remote control supplied.

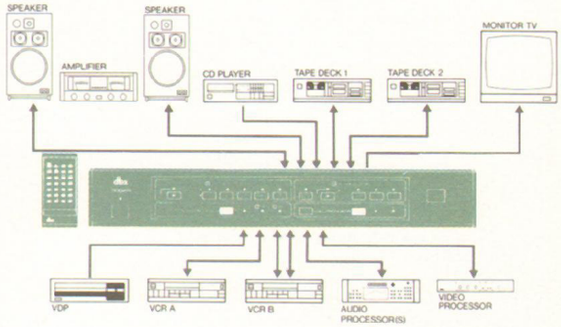
The dbx 500XR connects: LINE-1 and LINE-2 for audio program sources, TAPE-1 and TAPE-2 for audio tape recording/play, VDP for videodisc, VCR-1 and VCR-2 for video recording/play, AUDIO PROC for audio processing, and VIDEO PROC for video processing. There's also a monitor output for a TV or video display.

The operating versatility of the 500XR is truly staggering, as is the number of components it can handle. You can monitor audio while watching a video program—a simple way to enjoy "ambience videos" against the background of your favorite music. It's also possible to dub between two audio decks or between two VCRs. Interestingly, you can even dub from audio tape to video tape, and vice versa. This lets you, for instance, dub hi-fi video sound on an audio tape. In addition, you can add a new soundtrack to the tape you produced while you edit it.

Moreover, the 500XR connects an audio processor (graphic equalizer, dynamic expander, noise reduction system, etc.) as well as a video processor (video enhancer, color corrector, special-effects generator, etc.). So, when you dub video tapes, you can improve both the sound and video quality.

Switching and controlling is achieved electronically with the assistance of a microcomputer. This offers two advantages. One, using touch-sensitive tactile switches, the unit operates comfortably. Two, electronic control reduces insertion loss and crosstalk, since switching is done all electronically.

And to top it all off, you can operate the dbx 500XR from a hand-held remote. It's a full-function remote control offering POWER ON/OFF, MONITOR SELECTION, PROC ON/OFF, MODE, and AUDIO/VIDEO INPUT SELECTION. It virtually puts the control of our program route selector in the palm of your hand.



Connection Diagram

Specifications

5BX-DS Dynamic Range Controller with Remote Control

Expansion	OverEasy, from none to 1:1.5 maximum 20 dB downward
Impact Restoration Gain	To potential +10 dB (upward only)
Compression	OverEasy, from none to infinite maximum 40 dB
Frequency Response	20–20 kHz ±0.5 dB
Dynamic Range	106 dB
THD	0.15%
Equivalent Input Noise	–90 dBV
Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×1-3/4"×11-7/8"
Weight	10-1/4 lbs.

3BX-DS Three-Band Dynamic Range Controller

Expansion	Variable from none (1:1) to 50% (1:1.5) each band
Compression	0 to –50% (2:1)
Impact Restoration Gain	0 to +10 dB each band
Dynamic Range	Greater than 107 dB
Frequency Response	20–20 kHz ±0.5 dB
THD	Less than 0.15% at no expansion
Equivalent Input Noise	–90 dBV
Attack and Release Rates	Program-dependent, optimized for each band
Transition Level	Set at 200 mV, ranges from 70–600 mV
Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×1-3/4"×8-3/4"
Weight	6-1/8 lbs.

1BX-DS Dynamic Range Controller

Expansion	Variable from none (1:1) to 50% (1:1.5)
Compression	0 to –50% (2:1)
Impact Restoration Gain	0 to +10 dB
Frequency Response	20–20 kHz ±0.5 dB
THD	Less than 0.15% at no expansion
Equivalent Input Noise	–90 dBV
Transition Level	Set at 200 mV, ranges from 70–600 mV
Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×1-3/4"×8-3/4"
Weight	5-3/4 lbs.

120X-DS Subharmonic Synthesizer

Frequency Response	25–20 kHz ±1 dB
THD	Less than 0.05%
Synthesized Frequency	27–55 Hz with 55–110 Hz input
Output Noise	–85 dBV controls at maximum
LF Boost	+6 dB
Subharmonic Synthesis	+9 dB
Crossover Frequency	50–200 Hz adjustable
Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×1-3/4"×8-3/4"
Weight	6 lbs.

SNR-1 Single Ended Noise Reduction System

Effective Noise Reduction	Up to 40 dB (program dependent)
Frequency Response	20–20 kHz (±0.5 dB)
THD	0.1% (100 Hz–20 kHz)
Dynamic Range	105 dB
Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×1-3/4"×8-3/4"
Weight	5-7/8 lbs.

224X-DS Tape Noise Reduction System

Effective Noise Reduction	40 dB or more, depending on deck
Frequency Response	40–20 kHz ±0.5 dB
Dynamic Range	105 dB
THD	0.1% (100 Hz–20 kHz)
Equivalent Input Noise	–88 dBV
Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×1-3/4"×8-3/4"
Weight	6 lbs.

CA-1 Noise Reduction Decoder for Car Audio

Dynamic Range	100 dB
Frequency Response	Follows dbx Type II decoding curve 30–20 kHz ±1.0 dB
THD	<0.3% (at 1 kHz)
Tone Control Range	±12 dB at 100 Hz and 10 kHz
S/N	100 dB
Input Level	20 mV–1 V (set at 100 mV)
Power Requirements	12 V DC (10.8–15.6 V)
Dimensions (W×H×D)	6"×9-16"×3-13/16"
Weight	13 ozs.

14/10 Fully Computerized Automatic Equalizer Analyzer

Center Frequencies	31.5, 45, 63, 90, 125, 180, 250, 360, 550, 1k, 2k, 4k, 8k and 16 kHz
Control Range	±12 dB
Frequency Response	20–20 kHz ±0.5 dB
THD	Less than 0.03%
S/N	100 dB
Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×3-1/2"×11-7/8"
Weight	11-3/8 lbs.
Accessories	Microphone, instruction manual, warranty registration card

215G Stereo Frequency Equalizer

Frequency Response	5–100 kHz ±0.5 dB
THD	0.006%
Equivalent Input Noise	110 dB
Power Requirements	100–120/220-240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×1-3/4"×8-3/4"
Weight	4-7/8 lbs.

200XG Program Route Selector

Dimensions (W×H×D)	19"×1-3/4"×7-1/2"
Weight	4 lbs.

400XG Program Route Selector

Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	19"×1-3/4"×7-1/2"
Weight	5-1/16 lbs.

500XR Audio/Video Program Route Selector with Remote Control

Power Requirements	100–120/220–240 VAC, 50/60 Hz
Dimensions (W×H×D)	17-1/2"×2-5/8"×12-1/2"
Weight	8 lbs.

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Design and specifications are subject to change without notice for improvements.

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Printed in Japan 8809S