

MIRAGE

BPS-Series BIPOLAR SUBWOOFERS

*Explore the
high frontier of
low frequency
sound.*



Mirage®

THE ORIGINAL BIPOLAR LOUDSPEAKER™ 3641 McNicoll Avenue, Scarborough, Ontario, Canada M1X 1G5 (416)321-1800 Fax (416)321-1500

*Dulcissimi carissimi viri...
Benedictus...
M...
W...
G...
A...*

*W...
B...
A...
W...
A...*

To Build The World's Best Subwoofers, We Went Bipolar. Again.

You Can Start Hyperventilating Now

Music has the power to move us like nothing else. Be it a CD by your favorite group or composer, or the video soundtrack of a favorite film, music evokes not only an emotional, but a visceral response.

The pulse begins to race, the goosebumps rise, and a shiver of delight runs down your spine.

A large measure of that emotive power lies in the bass. And to capture that bass in all its depth, with virtually no distortion, we've created the Mirage BPS-Series of audio/video powered Bipolar subwoofers.

Get comfortable, take a deep breath and listen – you're about to explore the high frontier of low frequency.

Over the last decade, Mirage has proven the sonic superiority of Bipolar loudspeaker design. Ten years of intensive research and development have led to a line of speakers capable of delivering music that is more real, more natural, with sound that doesn't jump out at you but instead surrounds you evenly as it does in any "live" listening environment.

Now Mirage takes the revolution one step further with our new range of remarkable Bipolar subwoofers. By reducing speaker and cabinet distortions to previously unobtainable levels, the advantages of Bipolar sound have now been extended into the realm of the subwoofer.

For the most convincing demonstration, set a full wine glass atop our flagship BPS-210 or any of the three other subwoofers in our new BPS-Series.

You won't see a ripple on the surface of the liquid, even when the unit's sound pressure levels are loud enough to lift the cuffs of your pants.



The secret lies in Mirage's dual bass drivers, paired in a unique Bipolar configuration which eliminates both cabinet vibration and transfer of low frequency energy to the floor - a major source of coloration in single driver subwoofers.

When combined with Mirage Bipolar or conventional loudspeakers, BPS-Series subwoofers add dramatic new depth to any audio or home theater system, with bass so deep and distortion-free, you'll swear you're there.



Mirage

For the ultimate bottom end, it's the top-of-the-line BPSS-210

Bass reproduction simply doesn't get any better than with the BPSS-210 Bipolar servo-controlled subwoofer—the prime source of inspiration for the rest of the models in the new BPS-Series.

The BPSS-210 represents a quantum leap in low frequency reproduction, with wide bandwidth servo-control and a whole other arsenal of exclusive features in the war against distortion.

INERTIA-FREE BIPOLAR DESIGN

features dual 10" woofers with a unique magnetic structure and voice coil system incorporating a flux stabilizing copper ring which reduces distortion by a factor of 2.

A "PUSH-PULL" SURROUND — actually two totally sealed surrounds — acts as a donut of air suspending each woofer, again leading to significant noise reduction.

A 250 WATT RMS DISCRETE CLASS A/B CURRENT-SOURCE POWER AMPLIFIER which minimizes the unwanted power compression that occurs with conventional voltage-source amplifiers.



BPSS-210



BPSS-210 AMPLIFIER DETAIL

"FEED FORWARD" — a revolutionary method of compensating for non-linearities inherent in conventional subwoofers, resulting in a further reduction of distortion by a factor of 9.

EXCLUSIVE EQ CIRCUITRY (patent pending) which equalizes the subwoofer/cabinet combination for flat response to 3 Hz.

MIRAGE SERVO-CONTROL WITH DUAL ACCELEROMETERS reducing distortion yet again, this time by a factor of 10.

These features, coupled with the vibration-free design of our Bipolar technology, bring distortion in the BPSS-210 down to less than 1/2%, compared to the 30% typical of most subwoofers.

In fact, you'll be tempted to turn up the volume when listening to the 210 but you don't need to — because the only thing you're missing is the distortion noise that has masked subwoofer bass reproduction... until now.

And when coupled with its companion LFX-2 or LFX-3 external crossover, the BPSS-210 gives you the ultimate in precision control and outboard convenience, for the absolute optimum in performance.



For a flawless fit with your system, try on the BPS 100 or 150.

With the introduction of the BPS line, you have a choice of audio/video powered subwoofer systems, each the product of years of extensive research into accurate bass reproduction.

The new BPS-100 delivers 100 watts of power driving two 6-1/2" woofers in a Bipolar configuration. Never has so much "pure" bass come out of so compact a subwoofer.

Move up a step to the BPS-150, with 150 watts of power. Also Bipolar, it features two 8" woofers capable of producing bass down to 27 Hz with unerring accuracy. Like the 100, it incorporates its own internal electronic crossover.



BPS-100



BPS-150

Redefining low frequency reproduction was where we began...

Our mandate was simple. To review the very best in current subwoofer theory and design, and then to build something better.

There were, in fact, three goals to achieve. One, to produce a line of subwoofers capable of moving a lot of air (the BPS-210 displaces an awesome 900 cc's at 18 Hz). Two, to move that air with an absolute minimum of distortion. And three, to blend it with the sound of your main/satellite speakers with complete transparency.

The BPS-Series, handily meets those goals on every front, including a wide array of the most advanced new technological features with patents pending. They are all designed to minimize low frequency distortion while maximizing dynamic range, to produce the cleanest, purest sound possible.

MOSFET DISCRETE AMPLIFIERS

All BPS-Series subwoofers feature MOSFET discrete amplifiers for improved performance and reliability. For ultra efficiency, the 250 incorporates a revolutionary binary amp with PWM (pulse width modulation) that delivers high power with virtually no heat, along with tremendous headroom.

"CLIP-FREE" CIRCUITRY

Many powered subwoofers produce distorted sounds as a result of power amplifier clipping at high input levels. Mirage's exclusive clipping protection circuit continuously senses the input signal level and automatically adjusts to prevent such clipping of the waveform, maintaining consistent sound pressure levels and undistorted bass reproduction.

AUTO-ON/OFF

In addition to their distortion-reducing features, the BPS-Series also offers full remote capabilities thanks to their proprietary "Auto-On/Auto-Off" circuitry. Regardless of the input source, it allows the subwoofer to turn on automatically at the very first audio signal, with no delays, thumps or clicks. And it shuts off automatically too, courtesy of a built-in clock, at a pre-determined time after the final signal is received.

Without having to access the back of the unit to reach a power switch, it's a convenience feature particularly handy when considering custom installations of your hi-fi or home theater components.

AUDIO/VIDEO CONTROL

This 3-position switch provides an easy method of optimizing the low frequency performance of the subwoofer. In the audio mode, the equalization is set at "0" for maximally flat frequency response to capture the lowest notes present in recorded music.

In the video mode, the equalization is set at "3" for a 3dB boost at 45 Hz to increase the bass impact of special effects on movie soundtracks. Or for maximum punch, set the switch to "6" for a full 6dB boost.

HIGH AND LOW LEVEL INPUT/OUTPUTS

All BPS-Series subwoofers incorporate high level inputs and filtered high level outputs, as well as low level inputs for direct connection to your A/V processor or receiver. In addition, both the 150 and 250 offer low level 80 Hz filtered outputs for convenient "loop-through" connections.

By directing the low frequency signals through the subwoofer rather than your main/satellite speakers, it takes the load off both your speakers and amplifier.

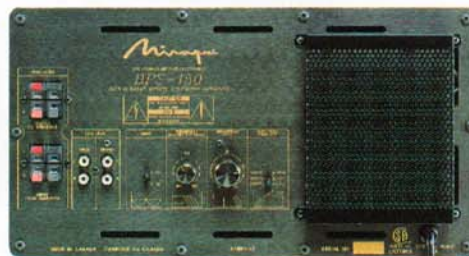
LOW PASS FILTER

This rotary control adjusts the high frequency roll-off of the subwoofer. Continuously variable from 50 Hz to 150 Hz, it is used to precisely match the subwoofer with the low frequency characteristics of a wide variety of main/satellite speakers.

PHASE CONTROL

This 2-position switch on the BPS-150/250 allows matching of the phase response of the subwoofer with that of the main/satellite speakers, so that both signals reach the listener in phase, regardless of room placement.

The result? A seamless blend of subwoofer and speakers for the most natural and full-bodied musical reproduction ever.



REAR DETAIL OF BPS-150

DRESSED IN BASIC BLACK SO THEY'RE ALWAYS IN STYLE.

All four subwoofers in the BPS-Series are flawlessly finished in black — a faux black ash for the 100, 150 and 250, and a rich, high gloss black for the BPS-210, BPS-250 and 150.

They blend into room settings as seamlessly as their sound and offer an ideal match with Mirage's complete range of Bipolar loudspeakers.



For the finest in fine-tuning, it's the Mirage LFX-Series External Crossovers

For convenient control of your Mirage subwoofer, combine it with one of our LFX-Series active crossovers.

Their adjustable Low Pass and High Pass Filters, in conjunction with their variable controls, allow you to shape the sound for the most seamless, natural blend between the subwoofer and the rest of your speakers.

The LFX-1 can accommodate one or two subwoofers. It features low level and high level inputs/outputs, adjustable high pass and low pass filters, phase switch, 3-position A/V switch and subwoofer output level control.

For audio purists, the LFX-2 can accommodate one or two subwoofers, and is designed for full stereo subwoofer applications where a discrete 2-channel — Left and Right — active crossover is required.

The film buff will opt for the LFX-3 which offers all of the technical advantages of the LFX-2 in a 3-channel design. It provides the



LFX-1



LFX-2



LFX-3

ability to blend up to three subwoofers perfectly with left, center and right speakers.

Mirage's breakthrough "Phantom/Real" Circuitry (patent pending) allows you for the first time, to dial the perfect blend between full-center channel sound and the phantom image created by left and right speakers alone.

This creates the most balanced, natural soundstage imaginable, making the LFX-3 the first choice for home theaters everywhere.

Specially designed to work with the superior sound design of the BPS-Series, the LFX-Series active crossovers will also enhance the precision control and performance of most other powered subwoofers.

In fact, a pair of LFX-3's can be used with any of the new Dolby AC3™ or DTS™ discrete digital formats.

Facts That Can't Be Distorted



The incredibly low distortion of the BPS-Series, along with their array of operating conveniences, are a direct result of Mirage's industry leading advances in subwoofer design technology.

For those searching for the precise data and documentation, we provide detailed technical specifications as further evidence of their decided superiority.

Of course, the ultimate proof can best be discovered by auditioning a Mirage BPS-Series Bipolar subwoofer with your own keenly critical ears.

Now, from the original Bipolar explorers comes the world's first complete line of Bipolar subwoofers. Track one down at the Mirage dealer nearest you and explore the possibilities.



MS-12

INTRODUCING the Mirage MS-12 Forward-Firing Subwoofer

Offering the same 100 watt amplifier as the BPS-100, the MS-12 is ideal for those desiring a single, forward-firing 12" subwoofer suitable for custom installations where the unit is built into wall or bookcase. See your authorized dealer for details.

MODELS:	BPS5-210	BPS-150	BPS-100	MS-12
Amplifier type:	High Current Discrete	High Current Discrete MOSFET	High Current Discrete MOSFET	High Current Discrete MOSFET
Power Output:	250 W 1000 W pk <.04% THD	150 W 600 W pk <.04% THD	100 W 400 W pk <.04% THD	100 W 400 W pk <.04% THD
Woofer(s)	2 X 10" bipolar	2 X 8" bipolar	2 X 6.5" bipolar	1 X 12" bipolar
Frequency Response:	18Hz-100Hz +0/-3dB	24Hz-150Hz +0/-3dB	29Hz-150Hz +0/-3dB	28Hz-150Hz +0/-3dB
Audio/Video Contour:	N/A	Audio: Flat Video: -3dB@35Hz +3dB@45Hz or +6dB@50Hz	Audio: Flat Video: -3dB@35Hz +3dB@45Hz or +6dB@50Hz	Audio: Flat Video: -3dB@35Hz +3dB@45Hz or +6dB@50Hz
Phase Switch:	N/A	0/180 deg.	N/A	N/A
Variable Low Pass Filter:	N/A	50Hz-150Hz 18dB/octave	50Hz-150Hz 18dB/octave	50Hz-150Hz 18dB/octave
Low Level Output High Pass Filter:	N/A	Fixed 80Hz 12dB/octave	N/A	N/A
High Level High Pass:	N/A	Approx 85Hz	Approx 85Hz	Approx 85Hz
Inputs:	Low Level (<300Mv) High Level	Low Level (<100Mv) High Level	Low Level (<100Mv) High Level	Low Level (<100Mv) High Level
Outputs:	N/A	Low Level High Level	High Level	High Level
Dimensions: HxWxD (in) (cm)	18x24x18 32x61x32	16x20.5x16 40.3x52x40.3	9.2x20.5x16 23.5x 52x40.7	16.3x17.3x16 41x43.8x38
Weight:	98 lbs 44.5Kg	58 lbs 26Kg	42 lbs 19Kg	48 lbs 21.8Kg
Finish:	High Gloss	Black Ash or High Gloss	Black Ash	Black Ash
Supply Voltage:	110/120V 60Hz 220/240V 50Hz	110/120V 60Hz 220/240V 50Hz	110/120V 60Hz 220/240V 50Hz	110/120V 60Hz 220/240V 50Hz

MODELS:	LFX-3	LFX-2	LFX-1
Type:	3 Channel Stereo High Pass Plus center ch mono Stereo subwoofer Plus center ch mono	2 Channel Stereo High Pass Stereo subwoofer	2 Channel Stereo High Pass Mono subwoofer
Phantom/Real System:	Yes	N/A	N/A
High Pass Filter:	50,63,80,100 Switch Selectable 12db/octave	50,63,80,100 Switch Selectable 12db/octave	50-150 Hz Cont. Variable 12db/octave
Low Pass Filter:	50,63,80,100 Switch Selectable 24db/octave	50,63,80,100 Switch Selectable 24db/octave	50-150 Hz Cont. Variable 24db/octave
Audio/Video EQ:	N/A	N/A	Audio: Flat Video: -3dB 30Hz +3dB 45Hz or +6dB 50Hz
Phase Switch:	0/180 Deg.	0/180 Deg.	0/180 Deg.
Mode Switch:	1 mono sub 2 stereo subs 3 (2) stereo subs (1) mono sub	1 mono sub 2 stereo subs	N/A
Dimensions:	2.5x17x9 in 6.3x43.2x23 cm	2.5x17x9 in 6.3x43.2x23 cm	1.9x9.7x4.75 in 4.8x24.6x12 cm
Finish:	Matt Black	Matt Black	Matt Black
Weight:	6.5 lbs / 3 Kg	6.4 lbs / 3 Kg	4.1 lbs / 1.9 Kg
Supply Voltage:	110V 60Hz or 220/240V 50Hz	110V 60Hz or 220/240V 50Hz	110V 60Hz or 220/240V 50Hz

Descriptions and specifications subject to change without notice.

*Dolby, the Double D symbol and AC3 are trademarks of Dolby Laboratories Licensing Corporation. DTS is a trademark of Digital Theater Systems Inc.

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