

powered subwoofers



Minapa[®]

THE ORIGINAL BIPOLAR LOUDSPEAKER™

ow n e r s m a n u a l

PS-8
PS-10
BPS-100i

PRINTED IN CANADA
7A1/M-PS

IMPORTANT SAFETY INSTRUCTIONS

- **Read Instructions** - All safety and operating instructions should be read before the product is operated.
- **Retain Instructions** - The safety and operating instructions should be retained for future reference.
- **Heed Warnings** - All warnings on the product and in the operating instructions should be adhered to.
- **Follow Instructions** - All operating and use instructions should be followed.
- **Cleaning** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- **Attachments** - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
- **Water and Moisture** - Do not use this product near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool.
- **Ventilation** - Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. They should also never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- **Power Sources** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, please refer to the operating instructions.
- **Grounding or Polarization** - This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- **Power Cord Protection** - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- **Overloading** - Do not overload wall outlets or extension cords, as this can result in a risk of fire or electric shock.



- **Object and Liquid Entry** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- **Servicing** - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- **Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- **Non-use Periods** - The power cord of the product should be unplugged from the outlet when left unused for a long period of time.
- **Damage Requiring** - The product should be serviced by qualified service personnel when
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the appliance; or
 - C. The product has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. Product has been dropped, or the enclosure damaged.

TABLE OF CONTENTS

Safety Instructions	1
Introduction	3
Features & Operating Controls	4
Room Acoustics & Subwoofer Placement	5
Subwoofer Connection to your Audio/Video System	6
Set-up Calibration	9
Specifications	10
Warranty	11

INTRODUCTION

We are proud to welcome you as a new owner of a Mirage Subwoofer. Mirage subwoofers are the result of extensive research into accurate bass reproduction and represent the leading edge in subwoofer design and performance. The finest components and cabinet materials combined with sophisticated manufacturing and quality control procedures ensure many years of exceptional performance and listening pleasure.

PLEASE TAKE TIME TO READ ALL OF THE INSTRUCTIONS CONTAINED IN THIS MANUAL TO MAKE CERTAIN YOUR SYSTEM IS PROPERLY INSTALLED AND FUNCTIONING CORRECTLY.

Be sure to unpack your subwoofer carefully. Retain the carton and all packing material for future use.

FEATURES AND OPERATING CONTROLS

All operating controls are conveniently located on the amplifier panel mounted on the rear of your subwoofer cabinet.

FEATURES

Auto-On/Auto-Off Circuit

Your subwoofer is equipped with a special "Auto-on/Auto-off" circuit. This circuit automatically turns your subwoofer on as soon as it senses a program signal. At a predetermined time after the program signal ends, this circuit automatically turns the subwoofer off.

Clipping Protection Circuit

Many powered subwoofers on the market today produce distorted sounds as a result of clipping at high input levels. Mirage's proprietary Clipping Protection Circuit (CPC) continuously senses the input signal level and automatically adjusts to prevent clipping of the wave form, maintaining undistorted bass reproduction.

High Level Inputs

The High Level inputs allow you to connect your subwoofer to the speaker outputs of any A/V Receiver or power amplifier.

Low-Level RCA Input Jacks

The two RCA Input jacks allow you to connect your subwoofer to

- EITHER:**
- 1) The subwoofer mono output of an A/V Receiver/Processor **OR**
 - 2) The subwoofer output of an External Crossover

NOTE: When using the External Crossover Input, the subwoofer Level control and LP Filter control on the subwoofer's rear panel are bypassed and have no effect on the subwoofer. In this mode, adjustments are made using the controls provided on the External Crossover.

OPERATING CONTROLS

Subwoofer Level Control

This rotary control adjusts the output level of your Mirage subwoofer and should be used to balance the level of the subwoofer with that on your main/satellite speakers. See "Set-up Calibration".

LP Filter (Low-pass) Control

This rotary control adjusts the high frequency roll-off of the subwoofer. Continuously variable from 50Hz to 100Hz, it is used to precisely match the subwoofer bass reproduction with that of your main/satellite speakers. See "Set-up Calibration".

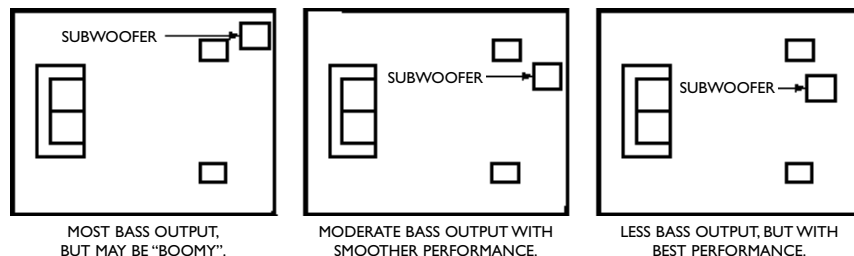
ROOM ACOUSTICS AND SUBWOOFER PLACEMENT

Mirage subwoofers can be placed virtually anywhere in your listening room without significantly affecting the stereo image of your main speakers. However, interactions between any subwoofer and room acoustic properties will have some impact on the overall bass performance. Reading this section will help you to find a placement for the subwoofer in your room which will yield the best bass performance.

CAUTION: MIRAGE SUBWOOFERS HAVE A BUILT-IN AMPLIFIER AND MUST HAVE ADEQUATE VENTILATION FOR COOLING PURPOSES. DO NOT PLACE THE SUBWOOFER NEAR HEAT SOURCES, OR ANYTHING WHICH MIGHT OBSTRUCT VENTILATION.

Although a clear path between the subwoofer and listening position is not required, it is important to leave approximately 4 inches of clearance between the subwoofer and walls or room furnishings. Generally, shorter runs of hook-up cables are preferable (and easier to hide), therefore locating your subwoofer relatively close to your audio equipment is often desirable.

The interaction between room acoustics and any subwoofer is closely related to the subwoofer's proximity to the walls. Typically, subwoofer placement directly in or close to a corner will produce the most bass output, placement along one wall but away from a corner will produce less bass output, and placement of the subwoofer further into the room will produce the least amount of bass output. It should also be realized that the corner location, although producing the most bass output often yields ill-defined or "boomy" bass. The latter two locations will deliver progressively more accurate bass performance.



We urge you to experiment with various subwoofer placements in your listening room to find the position which produces "deep and smooth" performance. Often, moving the subwoofer a foot or two can make a big sonic improvement. Remember to use familiar musical recordings with an abundance of low frequency information when you experiment with subwoofer locations.

SUBWOOFER CONNECTION TO YOUR AUDIO/VIDEO SYSTEM

There are essentially two methods by which you can connect your Mirage subwoofer to your audio/video system. The first one is "The High Level Connection" and the second is "The Low Level Connection". Your system components will dictate which method to use. The High level connections can be used with virtually any integrated receiver or amplifier. In both methods, the left and right channel inputs are combined and the resulting signal is passed through a variable (50Hz to 100Hz @ 18dB/octave) low pass filter for seamless matching of the subwoofer to the main-satellite speakers.

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- CAUTION: (A) DO NOT USE BOTH LOW LEVEL AND HIGH LEVEL METHODS SIMULTANEOUSLY.**
- (B) TURN OFF ALL POWER IN YOUR STEREO SYSTEM BEFORE PROCEEDING WITH THE INSTALLATION OF THE SUBWOOFER.**
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Using High Level Connections (see Diagram 1)

On the rear of your Mirage subwoofer cabinet is a block designated "High Level". This block contains two pairs of speaker terminals. These should be connected to speaker output terminals of your amp/receiver. Each pair of terminals are color coded black/red.

NOTE: These terminals will accept up to 18 Gauge speaker wire.

REMEMBER: Always connect red-to-red and black-to-black, when making the connections between amp/receiver to subwoofer. If you inadvertently reverse one of the connections (ie. red-to-black), you will notice a lack of bass from your subwoofer.

Using the "Subwoofer Output" of an A/V Receiver or Processor (See Diag. 2 Low Level Connection 1)

This method uses a single RCA-to-RCA interconnect cable to connect the "SUBWOOFER OUTPUT" jack from your A/V receiver or processor to the subwoofer "INPUT". This method does not remove low frequencies from your main speakers, and they will continue to reproduce bass frequencies.

Using External Crossover (See Diag. 3 Low Level Connection 2)

This method uses a single RCA-to-RCA interconnect cable to connect the "SUBWOOFER OUTPUT" jack from an external crossover to the "XOVER INPUT" of your subwoofer. This method by-passes the subwoofer's built-in low pass crossover and level control, thus, all subwoofer functions are controlled by the external crossover. (See External Crossover Owner's Manual for more details)

Diagram 1: HIGH LEVEL CONNECTION

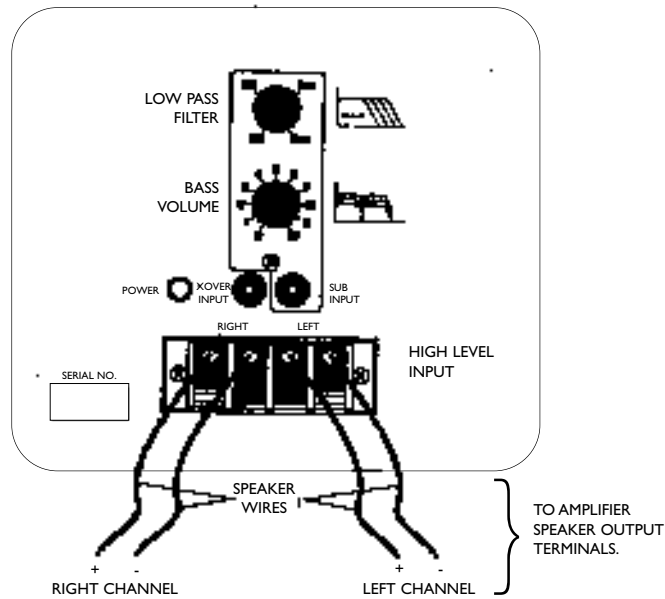


Diagram 2: LOW LEVEL CONNECTION I

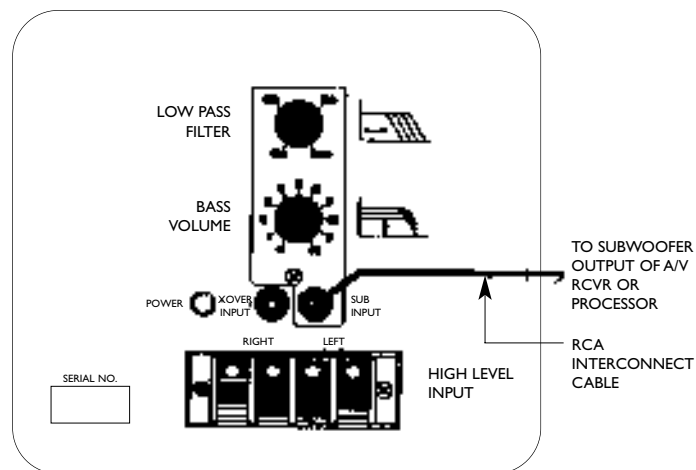
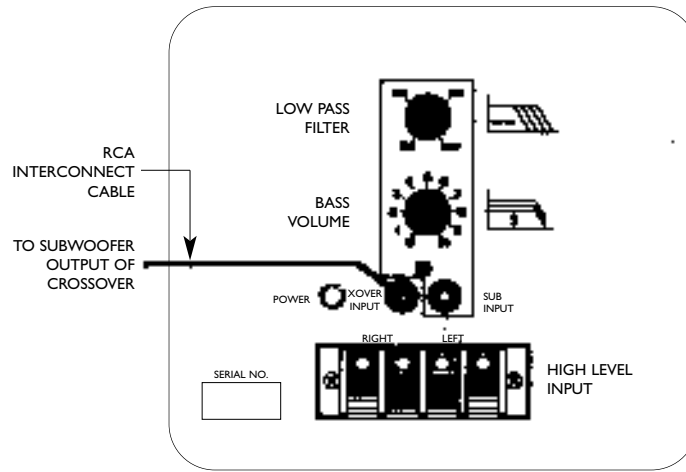


Diagram 3: LOW LEVEL CONNECTION 2

NOTE: Using an external crossover bypasses the subwoofer's controls. In this mode adjustments are made at the external crossover.

SET UP CALIBRATION

For best results when setting up your system, assume your normal listening position and have another person perform the following adjustments:

1. Set the **Subwoofer Level Control** to its zero position. Set the **Subwoofer LP Filter Control** to 50Hz. Set any loudness, bass/treble, and/or equalizer controls on your preamplifier or integrated amp/receiver to their normal or mid-point positions.
2. Play a familiar CD, record, or video soundtrack that has substantial bass content.
3. Gradually turn the **Subwoofer Level Control** clockwise until you achieve a neutral balance between the subwoofer's deep bass output and your main/satellite speakers.
4. Slowly turn the **Subwoofer LP Filter Control** clockwise to reach the best mid bass blend with your main/satellite speakers. This will be the point at which the bass retains solid impact and fullness. If the mid bass becomes "boomy" or ill defined, you have gone too far and you should turn the control counter-clockwise to the best balance point. If the sound is too thin (i.e., male vocals are not full sounding) then turn the control clockwise to the best balance point.

NOTE: The **Subwoofer Level Control** is designed to control the balance between your subwoofer and main/satellite speakers and should not be used as a substitute for the bass or loudness controls on your amplifier or receiver. Adjust the subwoofer's level for smoothest low frequency performance. If more bass is desired, advance the bass and/or loudness controls on your main amplifier or receiver.

SPECIFICATIONS

	PS-8	PS-10	BPS-100i
POWER OUTPUT:	100 WATTS 400 WATTS PEAK	100 WATTS 400 WATTS PEAK	100 WATTS 400 WATTS PEAK
WOOFER:	8" (20cm) long throw	10" (25.4cm) long throw	2 x 6-1/2" (16.5 cm) bipolar
ACOUSTIC FREQUENCY RESPONSE:	29Hz - 100Hz +0/-3dB	28Hz - 100Hz +0/-3dB	29Hz - 100Hz +0/-3dB
LOW PASS FILTER:	50 - 100 Hz @ 18dB/Octave	50 - 100 Hz @ 18dB/Octave	50 - 100 Hz @ 18dB/Octave
INPUT SENSITIVITY:			
HIGH LEVEL	250mV	250mV	250mV
LOW LEVEL	<100mV	<100mV	<100mV
EXTERNAL CROSSOVER	250mV	250mV	250mV
DIMENSIONS: (in) W x H x D (cm)	9-5/8 x 15-5/8 x 10-5/8 25.0 x 40.2 x 27.6	15-1/2 x 15-1/2 x 15 39.5 x 39.5 x 38	16 x 9-1/2 x 19-3/8 40.6 x 23.5 x 49.1
WEIGHT:	25.9 lb. 10.2 kg.	41.7 lb. 16.4 kg.	39.5 lb. 15.4 kg.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

LIMITED WARRANTY POLICY

Warranty in the United States and Canada

Mirage warrants this product to the retail purchaser against any failure resulting from original manufacturing defects in workmanship or materials. The warranty is in effect for a period of one (1) year from date of purchase from an authorized Mirage dealer and is valid only if the original dated bill of sale is presented when service is required.

The warranty does not cover damage caused during shipment, by accident, misuse, abuse, neglect, unauthorized product modification, failure to follow the instructions outlined in the owner's manual, failure to perform routine maintenance, damage resulting from unauthorized repairs or claims based upon misrepresentations of the warranty by the seller.

Warranty Service:

If you require service for your Mirage loudspeaker(s) at any time during the one (1) year warranty period, please contact: 1) the dealer from whom you purchased the product(s), 2) Mirage National Service, 203 Eggert Road, Buffalo, N.Y. 14215 Tel: 716-896-9801 or 3) Mirage Loudspeakers, a division of Audio Products International Corp., 3641 McNicoll Avenue, Scarborough, Ontario, Canada, M1X 1G5, Tel: 416-321-1800. You will be responsible for transporting the speakers in adequate packaging to protect them from damage in transit and for the shipping costs to an authorized Mirage service center or to Mirage Loudspeakers. If the product is returned for repair to Mirage Loudspeakers in Scarborough or Buffalo, the costs of the return shipment to you will be paid by Mirage, provided the repairs concerned fall within the Limited Warranty. Mirage Warranty is limited to repair or replacement of Mirage products. It does not cover any incidental or consequential damage of any kind. If the provisions in any advertisement, packing cartons or literature differ from those specified in this warranty, the terms of the Limited Warranty prevail.

Warranty Outside of The United States and CANADA:

Product warranties may be legislated differently from one country to another. Ask your local dealer for details of the LIMITED WARRANTY applicable in your country.

IMPORTANT: Please retain the carton and packing material for this Mirage product to protect it in the event it ever has to be shipped to a service center for repair. Product received damaged by a service center that has been shipped by the end user in other than the original packaging, will be repaired, refurbished and properly packaged for return shipment at the end user's expense.
