

OPERATIONS MANUAL

Bedienungsanleitung

Manual de funcionamiento

Manual de fonctionnement

Manual del utente

®



BPM-500

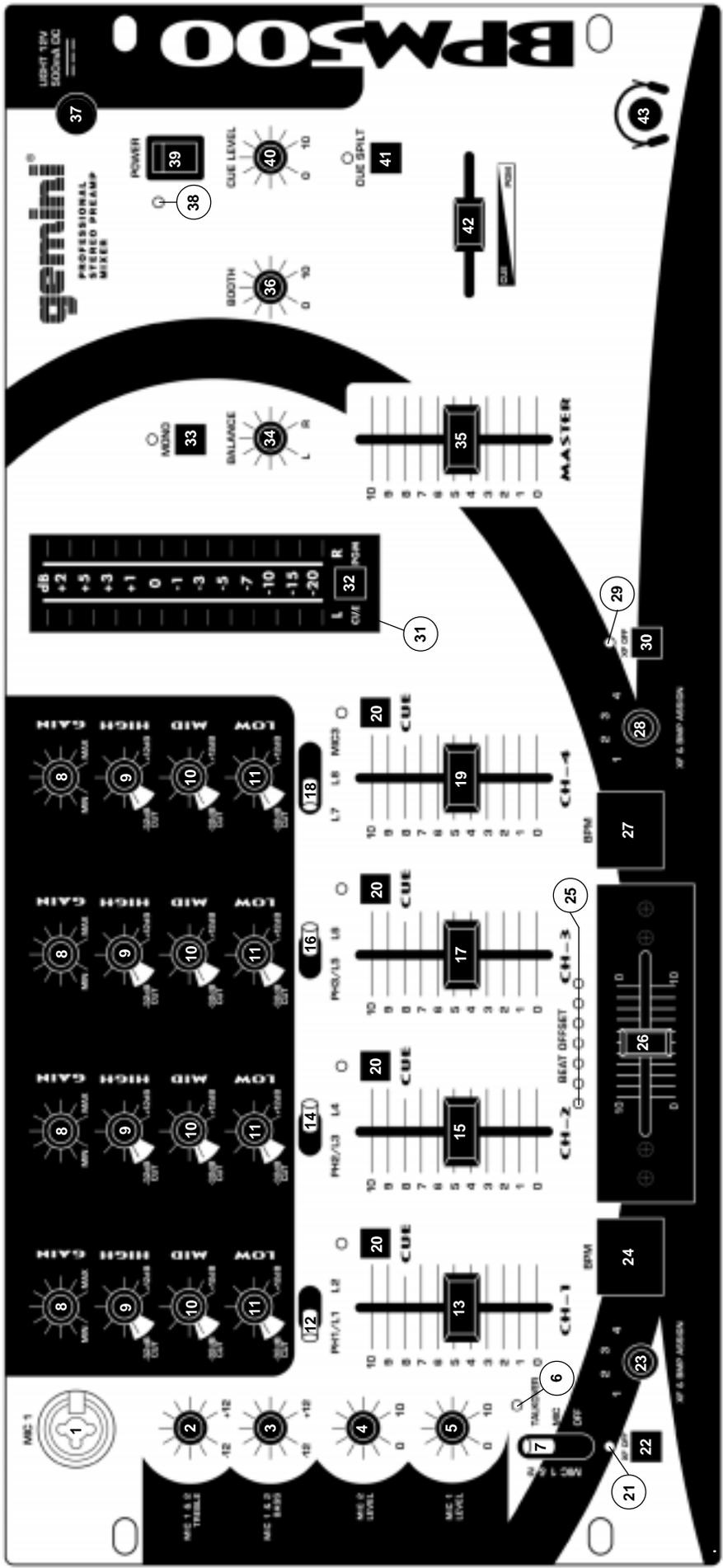
PROFESSIONAL STEREO PREAMP MIXER

Professioneller Stereo Vorverstärkermischpult

Mezclador-preamplificador estereofónico para el profesional

Mélangeur-préamplificateur stéréophonique pour le professionnel

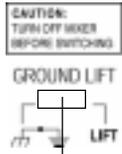
Miscelatore-preamplificatore stereofonico per il professionale



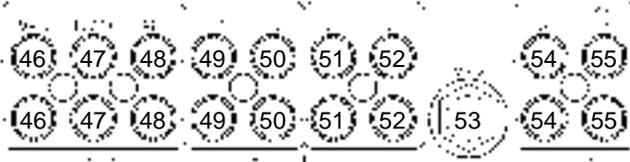
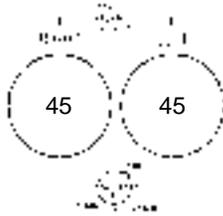
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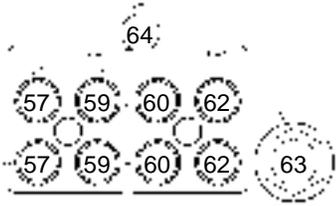
44



65



56



58

61

Introduction

Congratulations on purchasing the Gemini BPM-500 mixer. This state of the art mixer is backed by a three year warranty, excluding crossfader and channel slides. Prior to use, we suggest that you carefully read all the instructions.

Features

- 4 Stereo Channels
- State of the Art Cue Section
- 3 Phono/Line Convertible, 5 Line, and 3 Mic Inputs
- BPM Displays and Beat Offset Indicators
- Cut Feature for Low, Mid and High for each channel
- Gain, High, Mid and Low tone controls for each channel
- Talkover
- Loop
- Balanced and Unbalanced Master Outputs
- Booth and Record outputs
- Dual mode display

Cautions

1. All operating instructions should be read before using this equipment.
2. To reduce the risk of electrical shock, do not open the unit. There are **NO USER REPLACEABLE PARTS INSIDE**. Please refer servicing to a qualified service technician.

In the U.S.A., if you have any problems with this unit, call 1-732-969-9000 for customer service. Do not return equipment to your dealer.

3. Do not expose this unit to direct sunlight or to a heat source such as a radiator or stove.
4. This unit should be cleaned only with a damp cloth. Avoid solvents or other cleaning detergents.
5. When moving this equipment, it should be placed in its original carton and packaging. This will reduce the risk of damage during transit.
6. **DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.**
7. **DO NOT USE ANY SPRAY CLEANER OR LUBRICANT ON ANY CONTROLS OR SWITCHES.**

Connections

1. Before plugging in the power cord, make sure that the **VOLTAGE SELECTOR (44)** switch is set to the correct voltage.

NOTE: This product is double insulated and not intended to be grounded.

2. Make sure that the **POWER (39)** switch is in the off position. The **POWER LED (38)** will be off.
3. The BPM-500 is supplied with 4 sets of amp output jacks. The **BALANCED OUTPUT (45)** jacks are used to connect to your main amplifier using standard XLR cables. We recommend using the balanced amp outputs if the cables to your amp are 25 feet or more. **BALANCED OUTPUTS** have three separate conductors, two of which are signal (positive and negative) and one shield (ground). Pin 1 is ground (shield). Pin 2 is signal hot (positive). Pin 3 is signal cold (negative). The **MAIN OUTPUT (46)** jacks are unbalanced and used to connect to your main amplifier. The **REC OUTPUT (48)** jacks can be

used to connect the mixer to the record input of your recorder enabling you to record your mix. The **BOOTH OUTPUT (47)** jacks allow you to hook up an additional amplifier.

4. The **MIC 1 (1)** input (found on the front panel) accepts a 1/4" or XLR connector. The **MIC 2 (63)** input and the **MIC 3 (53)** input (found on the rear panel) accept 1/4" connectors. All accept balanced and unbalanced microphones.
5. On the rear panel are 3 stereo **PHONO/LINE (55, 59, 62)** inputs and 5 stereo **LINE (51, 52, 54, 57, 60)** inputs. The **PHONO/LINE SWITCH (56)** enables you to set the (55) input to Phono or Line. The **PHONO/LINE SWITCH (58)** enables you to set the (59) input to Phono or Line. The **PHONO/LINE SWITCH (61)** enables you to set the (62) input to Phono or Line. The phono inputs will accept only turntables with a magnetic cartridge. A **GROUND SCREW (64)** for you to ground your turntables is located on the rear panel. The stereo line inputs will accept any line level input such as a CD player, a cassette player, etc.
6. Headphones can be plugged into the front panel mounted **HEADPHONE (43)** jack.
7. The BPM-500 comes with a front panel **BNC LIGHT (37)** jack. This jack is for use with a gooseneck light like the Gemini GNL-700.
8. There are **LOOP INPUTS (50)** and **LOOP OUTPUTS (49)** located on the rear panel. If you are using an outboard signal processor, you can use the **LOOP OUTPUTS (49)** to send the signal to the device and the **LOOP INPUTS (50)** to bring the signal back in to the mixer. The unit comes with jumpers to be used with the loop inputs and outputs. Keep the jumpers in the unit if you are not using the loop to prevent interruptions in your music program.

Using the Ground Lift Switch

Depending on your system configuration, sometimes applying the ground will create a quieter signal path. Sometimes lifting the ground can eliminate ground loops and hum to create a quieter signal path.

1. With the mixer on, listen to the system in idle mode (no signal present) with the ground applied (the **GROUND LIFT SWITCH (65)** in the left position).
2. **Then turn the power off before moving the GROUND LIFT SWITCH (65).** Lift the ground by moving the **GROUND LIFT SWITCH** to the right, turn the power back on and listen to determine which position will provide a signal devoid of background noise and hum. Keep the **GROUND LIFT SWITCH** in the ground position if the noise level remains the same in either position.

CAUTION: DO NOT TERMINATE THE AC GROUND ON THE POWER MIXER IN ANY WAY. TERMINATION OF THE AC GROUND CAN BE HAZARDOUS.

Operation

1. **POWER ON:** Once you have made all the equipment connections to your mixer, press the **POWER SWITCH (39)**. The power will turn on and the **POWER LED (38)** will glow RED.
2. **CHANNEL 1:** The **GAIN (8), HIGH (9), MID (10), and LOW (11)** controls allow you to fully adjust the selected source. Switch # (12) allows you to select the **PHONO 1/LINE 1 (62)** or the **LINE 2 (60)** input. The **CHANNEL SLIDE (13)** controls the input level of this channel.
3. **CHANNEL 2:** The **GAIN (8), HIGH (9), MID (10), and LOW (11)** controls allow you to fully adjust the selected source. Switch # (14) allows you to select the **PHONO 2/LINE 3 (59)** or the **LINE 4 (57)** input. The **CHANNEL SLIDE (15)** controls the input level of this channel.
4. **CHANNEL 3:** The **GAIN (8), HIGH (9), MID (10), and LOW (11)** controls allow you to fully adjust the selected source. Switch # (16) allows you to select the **PHONO 3/LINE 5 (55)** or the **LINE 6 (54)** input. The **CHANNEL SLIDE (17)** controls the input level of this channel.

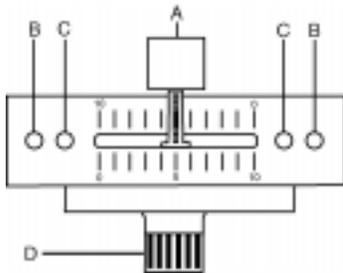
- CHANNEL 4: The **GAIN (8)**, **HIGH (9)**, **MID (10)**, and **LOW (11)** controls allow you to fully adjust the selected source. Switch # **(18)** allows you to select the **LINE 7 (52)**, **LINE 8 (51)** or the **MIC 3 (53)** input. The **CHANNEL SLIDE (19)** controls the input level of this channel.

NOTE: There is Low, Mid and High equalization for each channel with an extremely wide range of adjustment.

SUGGESTION: You can use the Cut Features on each channel to remove Low, Mid and/or High to create special effects.

- CROSSFADER SECTION: The **CROSSFADER (26)** allows the mixing of one source into another. The BPM-500 features an assignable crossfader. The **ASSIGN (23, 28)** switches allow you to select which channel will play through each side of the crossfader. The **ASSIGN (23)** switch has 4 settings (1, 2, 3 or 4) and allows you to select channel 1, 2, 3 or 4 to play through the left side of the crossfader. The **ASSIGN (28)** switch has 4 settings (1, 2, 3 or 4) and allows you to select channel 1, 2, 3 or 4 to play through the right side of the crossfader. There are two **OFF (22, 30)** buttons for the crossfader. When the **OFF (22)** button is pressed, the left side of the crossfader will be inactive and the **OFF LED (21)** will light. When the **OFF (30)** button is pressed, the right side of the crossfader will be inactive and the **OFF LED (29)** will light. Using the **OFF** button, be sure to deactivate the crossfader before changing the **ASSIGN** setting. This will avoid any click or popping sound in your signal while you are changing the assign setting. The **CROSSFADER (26)** in your unit is removable and if the need arises can be easily replaced. Crossfader units are available in three varieties. Part # RF-45 (which is identical to the crossfader supplied with the mixer) has a 45 mm travel from side to side. Part # RF-30 is available with a 30 mm travel distance. Also available is the PSF-45 with a special curve designed for scratch mixing. Just purchase one of these crossfader units from your Gemini dealer and follow these instructions:

- Unscrew the outside **FADER PLATE SCREWS (B)**. Do not touch the **INSIDE SCREWS (C)**.
- Carefully lift the fader and unplug the **CABLE (D)**.
- Plug the new fader into the cable and place it back in the mixer.
- Screw the fader to the mixer.



- BPM DISPLAY: There are **BPM DISPLAYS (24, 27)** for the two channels assigned to each side of the **CROSSFADER (26)**. They update approximately every 2.5 seconds and digitally display the Beats Per Minute allowing you to match the beats visually. **BPM DISPLAY (24)** reflects the Beats Per Minute of the channel assigned to the left side of the **CROSSFADER**, and **BPM DISPLAY (27)** reflects the Beats Per Minute of the channel assigned to the right side of the **CROSSFADER**.

NOTE: A [- -] reading will appear on the BPM DISPLAY if the track has unclear beats. The [- -] reading will also appear if there is no signal present.

- The **BEAT OFFSET INDICATORS (25)** light when the tracks of the two channels assigned to the crossfader are within 11 BPMs of each other and display how aligned the beats of the two channels are. When the **RED** LEDs light, the beats are not aligned. When the **YELLOW** LEDs light, the beats are almost aligned. When the **GREEN** LED lights, the beats are aligned perfectly.

NOTE: If the difference between the two channel's beats exceed 11 BPM, the BEAT OFFSET INDICATORS will not light.

SUGGESTION: You can use the BPM DISPLAYS to determine which tracks have similar or the same Beats Per Minute. When mixing two tracks with similar Beats Per Minute, you can use one source's pitch control to align the Beats Per Minute with the other source's BPM. The BPM DISPLAYS and the BEAT OFFSET INDICATORS update every 2.5 seconds and will reflect the change in BPM and indicate when the beats are aligned.

NOTE: Beat mixing is a skill that requires practice. Not every track has a strong beat, and beat mixing works best with tracks with clear and strong beats.

- LOOP SECTION: Removing the jumpers from the **LOOP OUTPUT (49)** and **LOOP INPUT (50)** jacks will activate the loop. Any device connected to the **LOOP OUTPUT (49)** and **LOOP INPUT (50)** jacks will be inserted into the signal path.
- OUTPUT CONTROL SECTION: The level of the **AMP OUT (45, 46)** is controlled by the **MASTER (35)** slide. Activating the **MONO (33)** button (the mono LED will light) makes the overall output mono. The **BOOTH (36)** control adjusts the level of the **BOOTH OUTPUT (47)**. HINT: The booth output is used by some DJs to run monitor speakers in their DJ booth. You can also use it as a second ZONE or AMP output.

NOTE: The RECORD OUT (48) has no level control. The level is set by the channel slides and the gain controls of the selected channel. The tonal qualities are set by the low, mid and high controls of that same channel.

- TALKOVER SECTION: The purpose of the talkover section is to allow the program playing to be muted so that the mic can be heard above the music. The **MIC/TALKOVER SWITCH (7)** controls MIC 1 and MIC 2 and has three settings. When the **MIC/TALKOVER SWITCH (7)** is in the bottom position, MIC 1 and MIC 2 and talkover are off. When the **MIC/TALKOVER SWITCH (7)** is in the center position MIC 1 and MIC 2 are on, the **MIC INDICATOR (6)** will glow, but talkover is off. When the **MIC/TALKOVER SWITCH (7)** is in the top position, MIC 1 and MIC 2 and talkover will be on and the volume of all sources except the Mic inputs are lowered by 16 dB. The **TREBLE (2)** and **BASS (3)** controls allow you to fully adjust the tone of MIC 1 and MIC 2. **MIC 1 LEVEL (5)** controls the level of MIC 1. The **MIC 2 LEVEL (4)** controls the level of MIC 2.
- CUE SECTION: By connecting a set of headphones to the **HEADPHONE (43)** jack, you can monitor any or all of the channels. Press the **CUE ASSIGN (20)** buttons for channels 1 - 4 to select the channel or channels to be monitored and their respective LED indicators will glow. Use the **CUE LEVEL (40)** control to adjust the cue volume without effecting the overall mix. By moving the **CUE PGM PAN (42)** control to the left you will be able to monitor the assigned cue signal. Moving the control to the right will monitor the PGM (program) output. Use the **CUE SPLIT (41)** button to split the signals from cue and program so that cue will be heard in one earphone and program will be heard in the other earphone.
- DISPLAY: The peak hold, dual function **DISPLAY (31)** indicates either the **MASTER (45, 46)** output left and right levels OR the the selected cue and program (premaster output) levels. You can choose the option you want by pressing the **DISPLAY (32)** button.

NOTE: When the DISPLAY (31) is in the cue/program mode, by adjusting GAIN (8), you can increase or decrease the signal to match the other channel's signal.

Specifications

INPUTS:

DJ Mic.....1.5mV 2Kohm balanced
Phono.....3mV 47Kohm
Line.....150 mV 27Kohm

OUTPUTS:

Amp/Booth.....0 dB 1V 400ohm
Max.....20V Peak to Peak
Rec.....225mV 5Kohm

MIC 1 & MIC 2:

DJ Mic.....1.5mV 2Kohm balanced
Bass.....± 12dB
High.....± 12dB

MIC 3:

DJ Mic.....1.5mV 2Kohm balanced
Controls.....Channel 4

GENERAL:

Bass (Chnls 1-4).....+ 12dB/- 32 dB
Mid (Chnls 1-4).....+ 12dB/- 32 dB
Treble (Chnls 1-4).....+ 12dB/- 32 dB
Gain (Chnls 1-4).....0 to -20dB
Frequency Response.....20Hz - 20KHz +/- 2dB
Distortion.....0.02%
S/N Ratio.....better than 80dB
Talkover Attenuation.....-16dB
Headphone Impedance.....16ohm
Power Source.....115/230V 50/60Hz 20W
Dimensions.....19"w x 4"h x 9"d (483 x 94 x 221 mm)
Weight.....10.2 lbs (4.6 kg)



In the U.S.A., if you have any problems with this unit, call 1-732-969-9000 for customer service. Do not return equipment to your dealer.

Parts of the design of this product may be protected by worldwide patents.

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