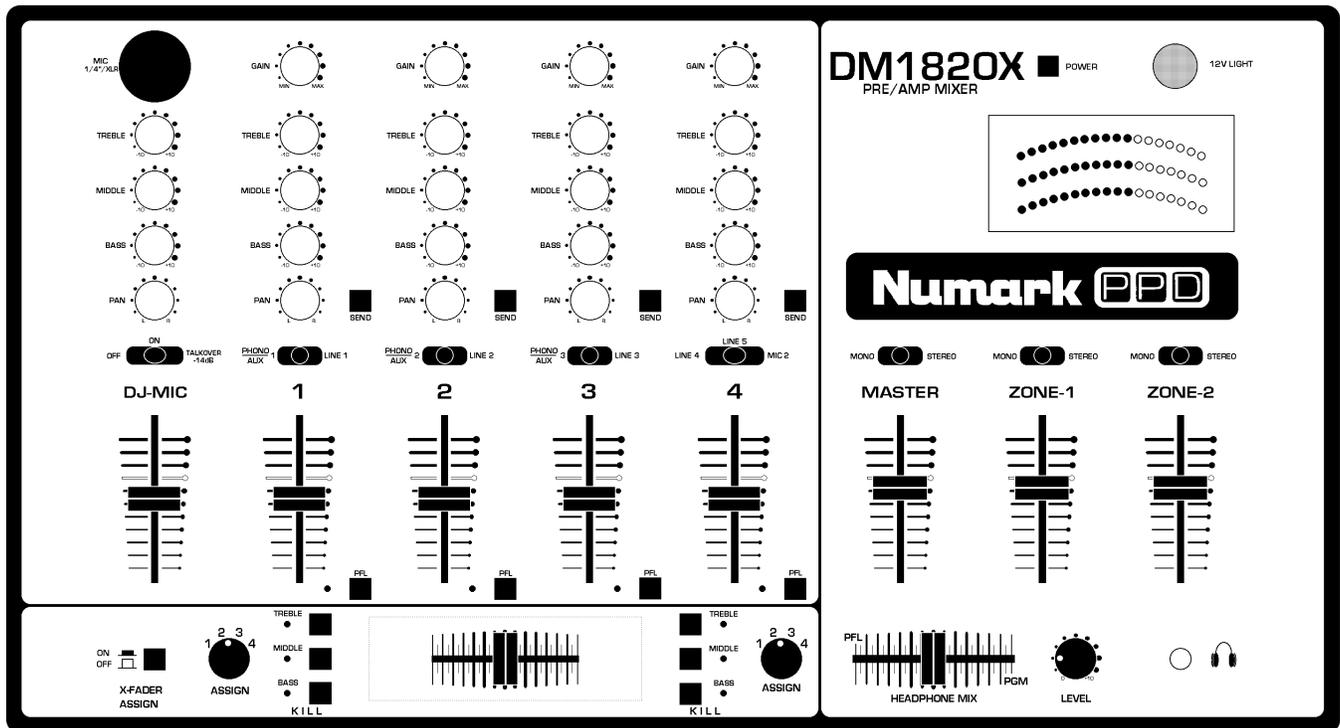


# Numark PPD

Professional Disc Jockey Products

## DM 1820X STEREO MIXER OWNER'S MANUAL



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# NUMARK DM1820X STEREO MIXER

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## **CONGRATULATIONS!**

You have purchased the **DM 1820X** Stereo Mixer by **Numark**. This equipment features all new circuitry and the latest in manufacturing and design technology to give you greater quality and better reliability than ever before. The **DM 1820X Preamp Mixer** has been designed by DJs for DJs. It gives you all of the controls and features you need in a professional piece of equipment to show off the best of your skills.

***Thank you for buying Numark DJ products!***

### ***FEATURES...***

- *User replaceable assignable ALPs™ crossfader .*
- *Bass, Mid, Treble, and Gain controls on every input channel.*
- *Left<->Right Pan control on each channel and the DJ Mic.*
- *Bass, Mid & Treble “KILL” switches for special effects and creative mixing.*
- ***Neutrik™** “Combo” connector allows 1/4” or XLR plug to be used for DJ Mic.*
- *8 line inputs.*
- *Three phono inputs switchable to line level.*
- *Processor Loop circuit for easily hooking up external effects.*
- *Pushbutton Cueing with PFL (pre-fader listen) on each channel.*
- *Headphone monitoring with PFL/Program cross-fader.*
- *Master and 2 Zone outputs.*
- *Stereo/Mono switch on the Master and Zones.*
- *Balanced Outputs.*
- *Tape Out for direct recording.*
- *Powerful stereo headphone output.*
- *High-end performance audio signal.*
- *12V BNC light connector.*

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**As a special bonus we have  
included a right angle headphone  
adapter with this mixer.  
Just plug your headphones into  
the adapter and then plug the  
adapter into your mixer.**

## IMPORTANT INFORMATION...

Please read this entire manual before connecting the DM1820X to your system.

### For optimum performance:

- Always make sure that AC power is OFF while making any connections.
- Do not use excessively long cables (i.e. over 50ft/14m) Be sure plugs and jacks are tightly mated. Loose connections can cause hum, noise or intermittents that could easily damage your speakers.
- Never use spray cleaners on the slide controls. Residues cause excessive dirt build-up and this will void your warranty. In normal use slide controls can last for many years. If they malfunction (usually because of a dirty or dusty environment) consult a professional technician.
- Never attempt to make any adjustments or repairs other than those described in this manual. Take the **DM1820X** to your dealer or to an authorized **Numark** Service Center.

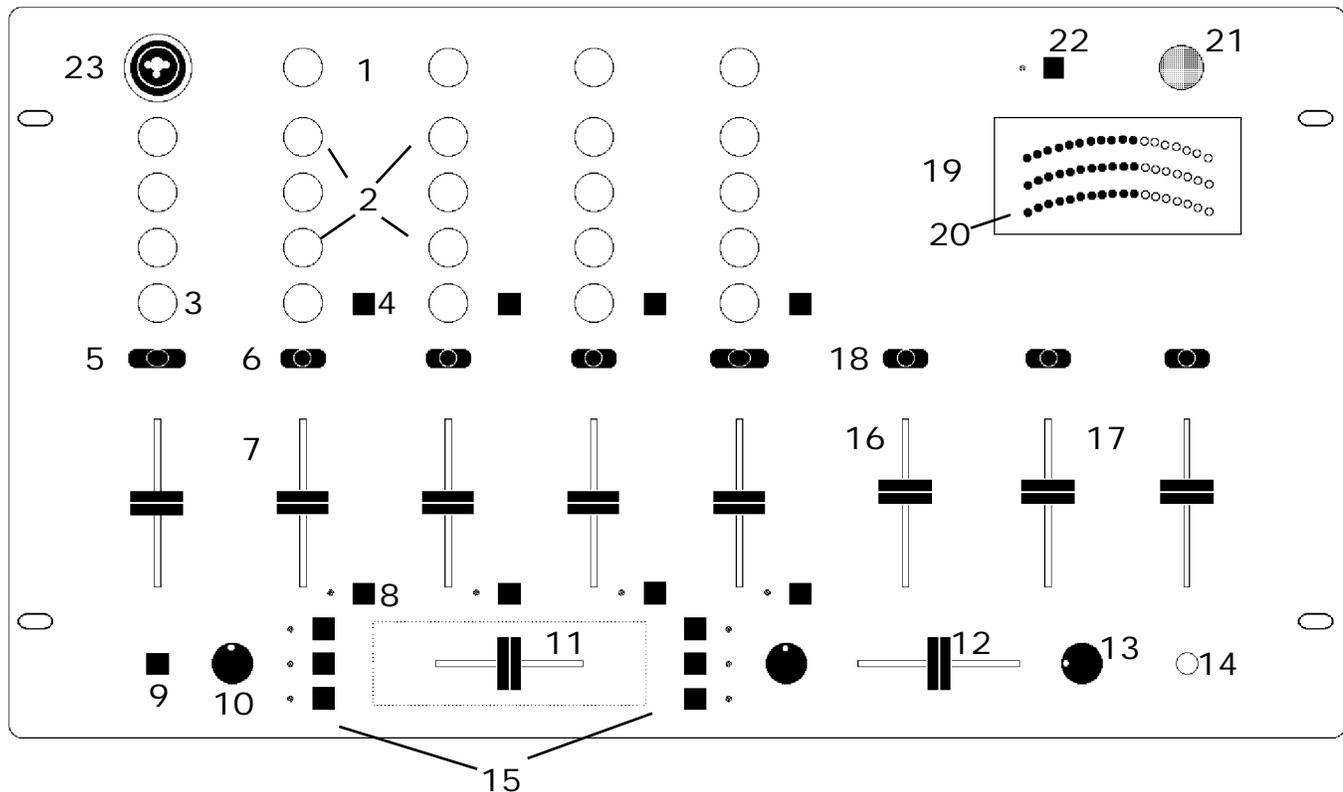
### A NOTE ON CABLES:

Make the input and output connections with readily available *low-capacitance* stereo cables. Quality cable makes a *big* difference in audio fidelity and punch. Use balanced connections whenever possible. See your **Numark** dealer or an electronics or audio specialist store if you are not sure which cables to get.

### SYSTEM PRECAUTIONS

- Use appropriate cables throughout your system: Quality shielded audio cables and terminated shielded video cables, low-capacitance preferred. Speaker cables must be 14-gauge minimum; 12- or 10-gauge is better.
- Reliability will be enhanced through the use of banana connectors on the speaker wires. Observe correct speaker wire polarity. If in doubt, consult your **Numark** dealer or a qualified technician.
- Take care to connect only one cable at a time. Pay attention to the color-coded, labelled Input and Output jacks.
- ALWAYS remember: **“TURN AMPS ON LAST AND OFF FIRST”**. Begin with master faders or volume controls on minimum and the amplifier gain/input control(s) down. Wait 8 to 10 seconds before turning up the volume. This prevents transients which may cause severe speaker damage.
- Use restraint when operating controls. Try to move them slowly. Rapid adjustments could damage speakers due to amplifier clipping.
- **Avoid amplifier “clipping” at all costs:** this occurs when the red LEDs (usually on the front panel of most professional power amplifiers) start flashing. **“Clipping”** is when the power amplifier is distorting and working beyond it’s limits. Amplifier distortion is THE major cause of speaker failure.
- To prevent fire or shock hazard, do not expose the unit to rain or moisture. **Never place cans of beer, soda, glasses of water or anything wet on top of the mixer!**

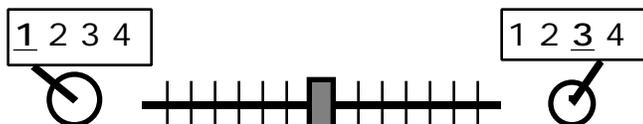
## DM1820X FRONT PANEL DIAGRAM...



1. **Channel Input Gain/Trim/Attenuation Controls.**  
These control the sensitivity of the inputs for Channels 1-4. Use these whenever a particular source causes overload of the preamp inputs. Attenuation range is 0dB to -20dB. Use these with the PFL (pre-fader listen) monitor when cueing.
2. **Treble, Middle and Bass Controls** fine tune the tone of your music through the sound system. Note that these are also available on the DJ Mic.
3. Use the **Pan Control** to maximize the Left or Right side of your Source.
4. **Send** button will send the individual channel signal to the send jack on the rear panel. This is used to route to an external effects unit. The signal comes back in from the effects unit through any line input channel you select and is then sent out to your amplifier through the Master Output jacks on the rear panel.
5. **DJ Mic Talkover Switch.** When engaged this mutes your music sources from channels 1-4. Releasing it brings you immediately back to full source level. It is very useful for announcements.
6. **Channels 1 - 4 Input Toggle Switches** select which source will be live to that channel based on what you have connected to the rear panel input section.
7. The **Input Faders** are low-noise, low-impedance, high-quality, smooth faders. These control individual source levels in the mix.
8. **Channel Cue Assign/PFL** pushbuttons are used to route channel audio to the **Monitor Section**. The channel input faders do not control the **Cue** volume. When the Cue button is pushed you get Pre Fader Listen(PFL). In addition, when these buttons are depressed the third row of the LED meter (20) will display the signal level of that channel on a PFL basis. The level can be adjusted by using the **Gain control(1)**.

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9. **The Crossfader In/Out Pushbutton** defeats the entire Crossfader function but leaves the Kill functions active.
10. **Crossfader/Kill Assign Switches** lets you choose which input channel will be heard when the Crossfader is moved to the left or right and affected by the Kill function.
11. The replaceable **Crossfader** achieves clean segues between two selected input channels.



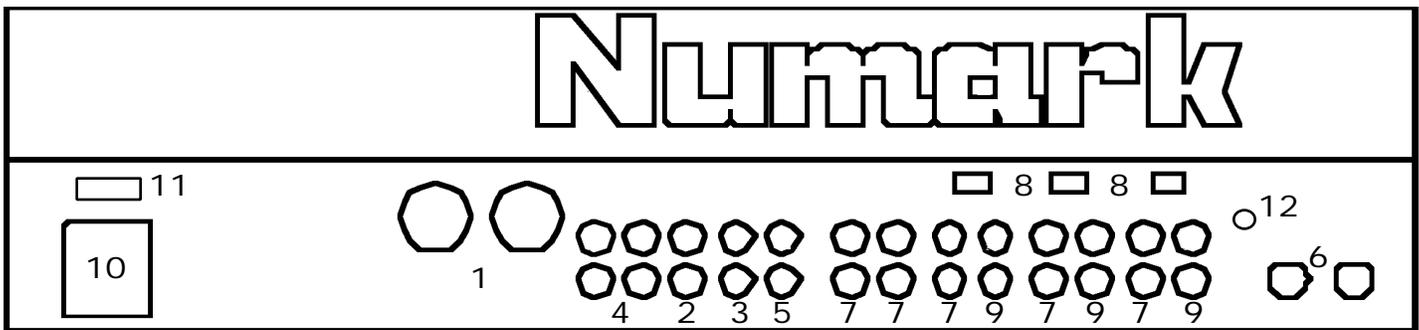
In this example, Channel 1 is selected on the Left and Channel 3 is selected on the Right. With the Crossfader centered both assigned channels are live. Use the Crossfader for fast and seamless segues from one channel to the next.

**Note:** *the crossfader is user replaceable. Simply unscrew the two large screws which hold it in place, lift it out, and disconnect its cable. Reattach the new crossfader and screw it back onto the unit - you're back in business! REPLACEMENT CROSSFADERS can be purchased from your local Numark Dealer, or by calling Numark Industries.*

12. The **Split Cue Level** controls what signal is being monitored through your headphones. Move the slide control to the left and you will hear your source music from the channel(s) selected with the cue/PFL switch. Move the control to the right and you will hear your program mix, or output. The slide control allows fast and frequent headphone monitoring.
13. The **Headphone Level** control sets the volume in your headphones.
14. The **Headphone Jack** accepts a 1/4" plug and is set on the front of the unit.
15. **Kill Switches and LEDs** have been provided for Treble, Mid and Bass Control on each side of the crossfader. This allows you to mute that frequency's audio output while leaving the other frequencies playing. This area is always active even when the crossfader is not. *Try that for a neat effect, or mix one channel's treble with another channel's bass (by cutting the mid and bass on the first channel and the treble and mid on the other channel.)*
16. **Master Level.** This controls overall output level. Note that you can select (18) whether you want stereo or mono.
17. The **Zone Levels** control speaker volume for other outputs such as control booth monitors, a tape deck, another amplifier, a sub-woofer, another mixer or a satellite speaker system. Note that you can select (18) whether you want stereo or mono.
- CONTRACTOR'S NOTE:** *Zone Level provides zone control in installations where there are two separate rooms (eg: a bar and a dance floor). The "Zone" volume should be controlled from the mixer not from the amplifier.*
18. The **Stereo/Mono Toggle Switches** allow you to select either stereo or mono output.
19. **Stereo Auto Peak Hold Level Meter.** The red LEDs for +3, +5 and +8dB hold program peaks for an instant. With peak metering, it's OK to be "in the red" as long as +5 or +8dB isn't constantly lit. Set crossover, equalizer and power amplifier inputs to avoid distortion at each step in the audio chain. Proper attention to the peak meters results in the punchiest possible sound without audible distortion.
20. **PFL Meter.** When the Cue/PFL switches are depressed this meter tracks pre-fader listen (PFL) signal for the channel selected instead of the mixer's output level.
21. **12V BNC Connector** allows a 12 volt gooseneck style "Numark" light to be connected directly to the mixer.
22. The **Power button** turns the unit on and off. Make sure your input faders (7) are turned down before you power up your mixer.
23. The **Mic Jack** is a Neutrik™ "Combo Jack" and allows connection of either a 1/4" jack or an XLR jack. This is ideal for connecting an XLR Gooseneck directly.



## DM1820X REAR PANEL DIAGRAM...



1. The **Balanced Main Outputs** are low-impedance XLR type connectors controlled by the **Master** fader.

2. The **Stereo Main Outputs** are low-impedance RCA connectors controlled by the **Master** fader.

3. The **Tape Outputs** are low-impedance unbalanced RCA jacks which output the program mix and allow you to connect any recording device.

4. The **Stereo Zone Outputs** are low-impedance unbalanced RCA jacks controlled by the **Zone Level** controls.

5. The **Send** can be attached to an external effects processor such as a sampler.

6. **Mic** is the mic input for the Mic Channel and Channel 4.

7. **Channels 1-5 Line Inputs** are unbalanced RCA jacks. The **Line Input** is selected with the toggle switch on the front panel. You can connect stereo audio from HiFi VCRs, cassette and reel-to-reel tape decks, DAT machines, CD players, laser discs, tuners, even synthesizers or other mixing consoles.

**NOTE:** Plug mono audio sources into both *Left and Right* inputs using a "Y" cable connector.

8. **Line/Phono Input switch.** Use this to allow line level equipment to be plugged into your phono inputs giving you a total of 8 line input options.

9. **Phono Inputs on Channels 1, 2 and 3** use unbalanced RCA jacks. Your input signal is fed directly to the **DM1820X's** high-quality RIAA phono preamplifiers so use this position only for moving magnet cartridges. Line level sources will overload the sensitive phono preamps and will sound very bad, so always be sure to toggle the line/phono switch over to line before connection of line sources.

10. **AC Cord.** See safety precautions on page 3 for proper treatment of the power cord.

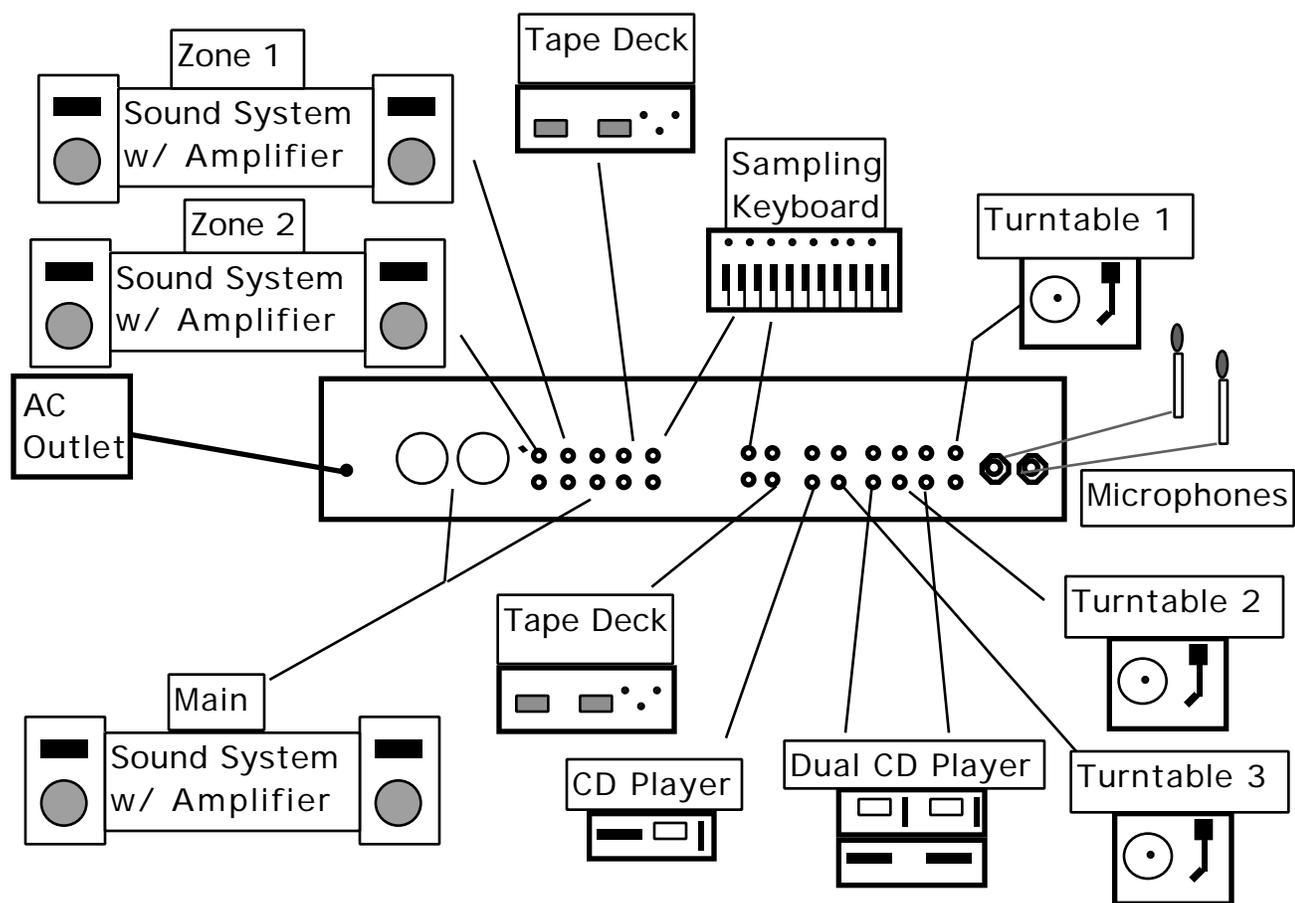
11. **Voltage Selector.** Set this for the appropriate voltage in your area

12. **GND** is the grounding lug for turntables 1, 2 and 3 (phono inputs on Channels 1, 2 and 3). Always use this connection (your turntable cable should have a grounding wire).

## *Instructions for Connection....*

1. Be sure the POWER (22) is OFF. All connections should be made before the unit is turned on. **Always remember "Turn Amps on last and off first!"**
2. Use appropriate cables throughout your system: quality shielded audio cables, low capacitance preferred. Speaker cable must be 14-gauge minimum; 12- or 10-gauge is better.
3. Connect your music sources on the rear of the unit. Up to 3 phono and 8 line sources (CD players, cassette decks, tuners, etc.) can be connected. When connecting to an input with a phono/line option switch remember to set the switch accordingly.
4. Connect the ground wire from your turntables (and any other sources that come with a ground) to the ground post on the rear panel. This will eliminate most common hum and feedback problems.
5. Connect your DJ mic on the front left side of the unit (23) or on the back of the unit at Mic 1. Connect your second mic at Mic 2 on the back of the unit.
6. Connect your headphones on the front right side of the unit at (14).
7. The OUTPUT MASTER jacks on the rear of the unit are for connecting to the amplifier. Use the balanced outputs if possible. Make sure you correctly attach the right and left cables to avoid phasing problems.

**DM1820X CONNECTION DIAGRAM...**



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## **SPECIFICATIONS...**

### **INPUTS:**

Line: 10k input impedance  
100 mV rms sensitivity (for 1.22 V output)  
Mic: 10k input impedance balanced/unbalanced  
3 mV rms sensitivity (for 1.22 V output)  
50 mV rms max input  
Phono: 47k input impedance  
1.5 mV rms sensitivity @ 1 KHz (for 1.22 V output)

### **OUTPUTS:**

Line: 9V rms max (+20 dBm)  
Headphone Amp: 5 watt into 47  
Distortion less than .01%

### **SIGNAL TO NOISE RATIOS (vs. maximum output):**

Line: Better than 82 dB  
Mic: Better than 75 dB  
Phono: Better than 75 dB

### **FREQUENCY RESPONSE:**

Mic: 20 Hz- 15k Hz  $\pm$  .5 dB  
Line: 20 Hz- 20k Hz  $\pm$  .5 dB  
Phono:  $\pm$  1 dB except for controlled attenuation of -3 dB  
@ 20 Hz to reduce rumble and feedback

### **CHANNEL EQ:**

Bass:  $\pm$ 15db @80Hz  
Middle:  $\pm$ 10db @1KHz  
Treble:  $\pm$ 15db @12.5KHz

### **TALKOVER ATTENUATION:**

Variable from no cut to -16 dB

### **KILL EFFECTS:**

Bass: -54dB at 50 Hz, -3dB at 400 Hz  
Middle: -44dB at 1k Hz, -3dB at 200Hz  
Treble: -53dB at 15k Hz, -3dB at 2k Hz

### **POWER CONSUMPTION:**

20 Watt typical, 28 watt with full headphone output

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*BLOCK DIAGRAM...*

# **Numark**

## ***Professional Disc Jockey Products***

### **Warranty and Service Information**

Numark Industries, LLC and Numark International, Inc. (hereafter "Numark") warrants each new product manufactured and/or supplied by it to be free from defects in material or workmanship under conditions of normal use and service for 360 days, beginning on the date of purchase from an authorized Numark Dealer, but not to exceed 2 years from date of shipment by Numark.

The Numark obligation under this warranty is limited to repairing or replacing, at its option, the product or part(s) therein; which upon examination by Numark shall appear to be defective or not up to factory specifications; providing the Numark product is returned (transportation prepaid) to Numark.

Numark shall not be liable for any damages, consequential or otherwise, resulting from the use and operation of this product and makes no other warranty(s) either express or implied on this product, including any warranty of merchantability.

This warranty does not extend to any of our products which have been subjected to misuse, neglect, accident, incorrect wiring not our own, improper installation, or use in violation of instructions furnished by us, nor extended to units which have been repaired or altered outside of our factory, nor to cases where the serial number thereof has been removed, defaced, or changed, nor to accessories used therewith not of our own manufacture. Numark reserves the right to make changes or improvements in its products, during subsequent production, without incurring the obligation to install such changes or improvements on previously manufactured equipment.

To place this warranty into effect, the enclosed WARRANTY REGISTRATION CARD must be returned to Numark Industries, LLC within thirty (30) days after date of purchase.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

#### **EQUIPMENT TRANSPORT**

A Return Authorization number should be obtained from Numark through the addresses or phone numbers below.

It is the customer's obligation, when returning faulty equipment, to properly pack the Numark equipment in its original packaging. Failure to do so may inadequately protect the equipment in transit and, therefore, jeopardize the customer's warranty. The defective Numark equipment should be sent, FREIGHT PREPAID with Return Authorization number to:

#### **NUMARK INDUSTRIES**

**11 Helmsman Road  
North Kingstown, RI 02852 USA  
Attention: Service Department**

**Telephone: +1 (401) 295-9000  
Fax: +1 (401) 295-5200  
E-mail: numark@numark.com**