

dbx[®]
by HARMAN

1074

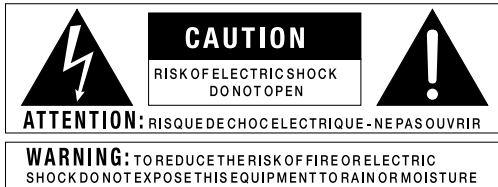


Quad Noise Gate



User Manual

IMPORTANT SAFETY INFORMATION



The symbols shown above are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash with arrowpoint in an equilateral triangle means that there are dangerous voltages present within the unit. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the owner's manual.

These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

SAFETY INSTRUCTIONS

NOTICE FOR CUSTOMERS IF YOUR UNIT IS EQUIPPED WITH A POWER CORD.

WARNING: THIS APPLIANCE SHALL BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARTHING CONNECTION.

The cores in the mains lead are coloured in accordance with the following code:

GREEN and YELLOW - Earth BLUE - Neutral BROWN - Live

As colours of the cores in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The core which is coloured green and yellow must be connected to the terminal in the plug marked with the letter E, or with the earth symbol, or coloured green, or green and yellow.
- The core which is coloured blue must be connected to the terminal marked N or coloured black.
- The core which is coloured brown must be connected to the terminal marked L or coloured red.

This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. If the attachment plug needs to be changed, refer servicing to qualified service personnel who should refer to the table below. The green/yellow wire shall be connected directly to the units chassis.

CONDUCTOR		WIRE COLOR	
		Normal	Alt
L	LIVE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	EARTH GND	GREEN/ YEL	GREEN

WARNING: If the ground is defeated, certain fault conditions in the unit or in the system to which it is connected can result in full line voltage between chassis and earth ground. Severe injury or death can then result if the chassis and earth ground are touched simultaneously.

WARNING FOR YOUR PROTECTION READ THE FOLLOWING:

KEEP THESE INSTRUCTIONS

HEED ALL WARNINGS

FOLLOW ALL INSTRUCTIONS

THE APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING LIQUID AND NO OBJECT FILLED WITH LIQUID, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

CLEAN ONLY WITH A DRY CLOTH.

DO NOT BLOCK ANY OF THE VENTILATION OPENINGS. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

DO NOT INSTALL NEAR ANY HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES, OR OTHER APPARATUS (INCLUDING AMPLIFIERS) THAT PRODUCE HEAT.

ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.

UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Use only with the cart stand, tripod bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

POWER ON/OFF SWITCH: If the equipment has a Power switch, the Power switch used in this piece of equipment DOES NOT break the connection from the mains.

MAINS DISCONNECT: The plug shall remain readily operable. For rack-mount or installation where plug is not accessible, an all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated into the electrical installation of the rack or building.

FOR UNITS EQUIPPED WITH EXTERNALLY ACCESSIBLE FUSE RECEPTACLE: Replace fuse with same type and rating only.

MULTIPLE-INPUT VOLTAGE: This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. Connect this equipment only to the power source indicated on the equipment rear panel. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel or equivalent.

If connected to 240V supply, a suitable CSA/UL certified power cord shall be used for this supply.

IMPORTANT SAFETY INFORMATION

ELECTROMAGNETIC COMPATIBILITY

This unit conforms to the Product Specifications noted on the **Declaration of Conformity**. Operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

Operation of this unit within significant electromagnetic fields should be avoided.

- use only shielded interconnecting cables.

U.K. MAINS PLUG WARNING

A molded mains plug that has been cut off from the cord is unsafe. Discard the mains plug at a suitable disposal facility.

NEVER UNDER ANY CIRCUMSTANCES SHOULD YOU INSERT A DAMAGED OR CUT MAINS PLUG INTO A 13 AMP POWER SOCKET.

Do not use the mains plug without the fuse cover in place. Replacement fuse covers can be obtained from your local retailer. Replacement fuses are 13 amps and **MUST** be ASTA approved to BS1362.



If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private household in the 25 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For Countries not mentioned above, please contact your local authorities for a correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

DECLARATION OF CONFORMITY

Manufacturer's Name: dbx Professional Products
Manufacturer's Address: 8760 S. Sandy Parkway
Sandy, Utah 84070, USA

declares that the product:

Product name: dbx 1074

Note: Product name may be suffixed by the letters-EU.

Product option: None

conforms to the following Product Specifications:

Safety: IEC 60065 -01+Amd 1

EMC: EN 55022:2006 (N/A; Analog Product)
IEC61000-4-2
IEC61000-4-3
IEC61000-4-4
IEC61000-4-5
IEC61000-4-6
IEC61000-4-8
IEC61000-4-11

Supplementary Information:

The product herewith complies with the requirements of the:
Low Voltage Directive 2006/95/EC
EMC Directive 2004/108/EC.
RoHS Directive 2002/95/EC
WEEE Directive 2002/96/EC

With regard to Directive 2005/32/EC and EC Regulation 1275/2008 of 17 December 2008, this product is designed, produced, and classified as Professional Audio Equipment and thus is exempt from this Directive.

Roger Johnsen
Director, Engineering
Signal Processing
8760 S. Sandy Parkway
Sandy, Utah 84070, USA
Date: August 16, 2011

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Introduction

0.1 Defining the 1074	2
0.2 Service Contact Info	3
0.3 Warranty.....	3
0.4 Installation Recommendations	4

Section 1 - Getting Started

1.1 Rear Panel Connections.....	6
1.2 Front Panel Connections	6

Section 2 - Setups and Applications

2.1 Basic Connection	8
2.2 Suggested Applications.....	8

Appendix

Block Diagram	10
Specifications	11

1074

INTRODUCTION

INTRO
CUSTOMER SERVICE INFO
1074 DEFINED
WARRANTY INFO



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by HARMAN

INTRODUCTION

Congratulations on your purchase of the dbx Professional Products 1074 Quad Noise Gate. For over 30 years, dbx Professional Products has been the industry leader in dynamics processing. With the introduction of the 1074, the standard for Noise Gate Processors has been raised by the industry leader once again. The 1074 Quad Noise gate offers is the perfect tool for any gating need that may come about. From whether you need to remove unwanted noise or other background noise. The 1074 is also ideal for gating high transient material through four independent channels.

This manual will be your guide to understanding the full functionality of the powerful 1074. After you have become familiar with the unit, we encourage you to experiment and find creative ways that the 1074 can help you optimize your specific application.

0.1 Defining the 1074

The dbx 1074 Quad Noise gate provides the user with four independent channels of noise gate capabilities. In addition, the 1074 also offers the following features:

- *4 Dedicated and independent Channels of user selectable Noise gating in any combination including: dual stereo, or two mono and one stereo.*
- *Advanced program adaptive circuitry ensures fast attack times to preserve the character of percussive sounds and incredibly smooth release that won't chop off reverb tails or decaying guitar chords*
- *2-Segment threshold status LEDs on each channel*
- *Balanced Inputs and Outputs: Stereo couple for channels 1&2 and 3&4*
- *Key Input for External Gate Triggering*

0.2 Service Contact Info

If you require technical support, contact dbx Customer Service. Be prepared to accurately describe the problem. Know the serial number of your unit. This is printed on a sticker attached to the rear panel. If you have not already taken the time to fill out your warranty registration card and send it in, please do so now.

Before you return a product to the factory for service, we recommend you refer to the manual. Make sure you have correctly followed installation steps and operation procedures. If you are still unable to solve a problem, contact our Customer Service Department at (801) 568-7660 for consultation. If you need to return a product to the factory for service, you **MUST** contact Customer Service to obtain a Return Authorization Number.

No returned products will be accepted at the factory without a Return Authorization Number.

Please refer to the warranty below, which extends to the first end-user. After expiration of the warranty, a reasonable charge will be made for parts, labor, and packing if you choose to use the factory service facility. In all cases, you are responsible for transportation charges to the factory. dbx will pay return shipping if the unit is still under warranty.

Use the original packing material if it is available. Mark the package with the name of the shipper and with these words in red: DELICATE INSTRUMENT, FRAGILE! Insure the package properly. Ship prepaid, not collect. Do not ship parcel post.

0.3 Warranty

This warranty is valid only for the original purchaser and only in the United States.

- 1). The warranty registration card that accompanies this product must be mailed within 30 days after purchase date to validate this warranty. Proof-of-purchase is considered to be the burden of the consumer.
- 2). dbx warrants this product, when bought and used solely within the U.S., to be free from defects in materials and workmanship under normal use and service.
- 3). dbx liability under this warranty is limited to repairing or, at our discretion, replacing defective materials that show evidence of defect, provided the product is returned to dbx WITH RETURN AUTHORIZATION from the factory, where all parts and labor will be covered up to a period of two years. A Return Authorization number must be obtained from dbx by telephone. The company shall not be liable for any consequential damage as a result of the product's use in any circuit or assembly.
- 4). dbx reserves the right to make changes in design or make additions to or improvements upon this product without incurring any obligation to install the same additions or improvements on products previously manufactured.
- 5). The foregoing is in lieu of all other warranties, expressed or implied, and dbx neither assumes nor authorizes any person to assume on its behalf any obligation or liability in connection with the sale of this product. In no event shall dbx or its dealers be liable for special or consequential damages or from any delay in the performance of this warranty due to causes beyond their control.

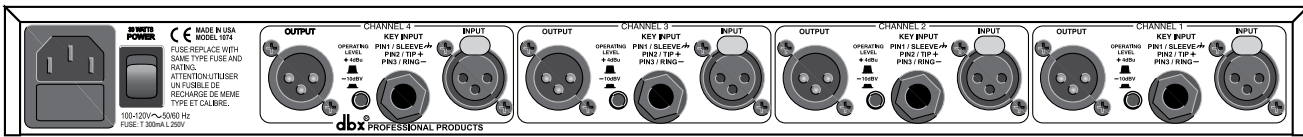
0.4 Installation Recommendations

FOR RACK MOUNT USE ONLY - Install the 1074 in your rack with the provided rack screws. When installed in a rack, the unit should be positioned with enough room (at least one 1U above the and 1U below the unit) to allow proper ventilation. The 1074 should not be mounted above or below anything that generates excessive heat. Ambient temperatures should not exceed 113°F (45°C) when equipment is in use. Although the unit is shielded against radio frequency and electromagnetic interference, extremely high fields of RF and EMI should be avoided where possible.

GETTING STARTED



1.1 Rear Panel Connections



IEC Power Cord Receptacle

This is the power cord receptacle of the 1074. An IEC cord is included with the shipped product.

Power Switch

Turns the 1074 on and off.

Output Connectors

The output section of the 1074 offers electronically balanced XLR connections. An output transformer option is available when very long cable distances are required (see “Specifications”).

Operating Level Switch

The Operating Level switch allows you to select between either a +4dBu operating level or -10dBv operating level, allowing you to match the operating level of the connecting components.

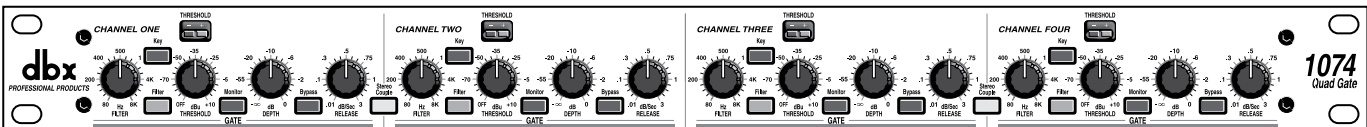
Key Input Jack

The 1/4” TRS Key Input jack, allows you to add a source signal directly into the gating path of the 1074, which is used to trigger the gating effect.

Input Connectors

The input section of the 1074 offers electronically balanced XLR connections.

1.2 Front Panel Controls



Note: The following controls are independently adjustable for each channel of the 1074 or can be stereo coupled per pair of channels – the exception, of course, being the STEREO COUPLE switch.

Filter Control - 80Hz to 8kHz

The Filter control allows you to select the frequency at which gating occurs. Frequency ranges from 80Hz to 8kHz.

Filter - On/Off

Pressing the Filter switch will engage the filter.

Key Input - On/Off

Pressing the Key switch will engage the inserted Key input source signal.

Monitor - On/Off

When the Monitor switch is engaged, it allows you to monitor the filter control (when the Filter switch is engaged) and/or the key input (when the Key switch is engaged). Once adjustments have been made, switch the Monitor switch back out for normal operation.

Stereo Couple Switch

The Stereo Couple switch is used to select either Stereo or Dual Mono modes on the 1074. To couple channels as stereo pairs, press the Stereo Couple switch between each pair. When this procedure is performed, the odd-numbered channel becomes the master, and the even-numbered channel, becomes the slave. The slave channel's controls, switches, and LEDs will be disabled, and control for both channels of the pair is controlled via the master channel's controls.

With the Stereo Couple switch out, each channel of the pair (1&2) or (3&4) function as two separate mono gates. Each channel has its own independent controls.

Stereo Couple LED

The Stereo Couple LED indicates that the two channels are stereo-coupled.

Threshold Control

Adjusting this control sets the level at which the gate will open and allow the signal at the input to pass through to the output. Turning the knob fully counter clockwise (to off) allows the gate to pass all signals unattenuated, effectively bypassing the gate. Turning the knob fully clockwise causes the gate to attenuate input signals below +10dBu. The amount of attenuation depends on the setting of the depth control.

Depth Control

This control sets the amount of attenuation applied to the signal once it is below the threshold.

Release Control

Adjusting the Release control sets how fast the gate closes once the input signal falls below the threshold. The release rate is from .01 seconds (fully counter clockwise) to 3 seconds (fully clockwise).

Note: The gate release rate is accelerating, in that the dB/Sec rate continually increases as the gate closes.

2.1 Basic Connection of the 1074

- Turn off all equipment before making any connections.
- Install the 1074 in your rack with the provided rack screws. It is essential that when the 1074 is being mounted in a rack mounting enclosure, the unit should be positioned with enough room (at least 1U of space above the unit and 1U of space at the below the unit) to allow proper ventilation. The 1074 should not be mounted above or below anything that generates excessive heat. Ambient temperatures should not exceed 113°F (45°C) when equipment is in use. Although the unit is shielded against radio frequency and electromagnetic interference, extremely high fields of RF and EMI should be avoided where possible.
- Make audio connections via XLR plugs.
For input and output connections, use the XLR balanced or unbalanced connections. For Key input applications, use 1/4" TRS balanced or unbalanced connections.
- Apply power to the 1074. Connect the AC power cord to the AC power receptacle on the back of the unit. Route the AC power cord to a convenient power outlet away from audio lines. The unit may be turned on and off from the rear panel power switch or from a master equipment power switch.

2.2 Suggested Applications

- 1). Gating Dry and Percussive sounds such as snare Drum and Kick Drum.
- 2). Gating sounds that have longer decay times such as cymbals and Pianos
- 3). Gating Hum or Buzz from live instruments or recorded tracks.
- 4). Eliminating Headphone leakage into microphones.
- 5). Gating instrument microphones to eliminate amplifier bleed.
- 6). Adding Dynamics to a track or mic'd instrument.
- 7). Suppress feedback by gating microphones.
- 8). Control gating action by an external signal at the Key Input on the rear panel.
- 9). "Tighten Up" a room by gating out undesired ambience.

APPENDIX

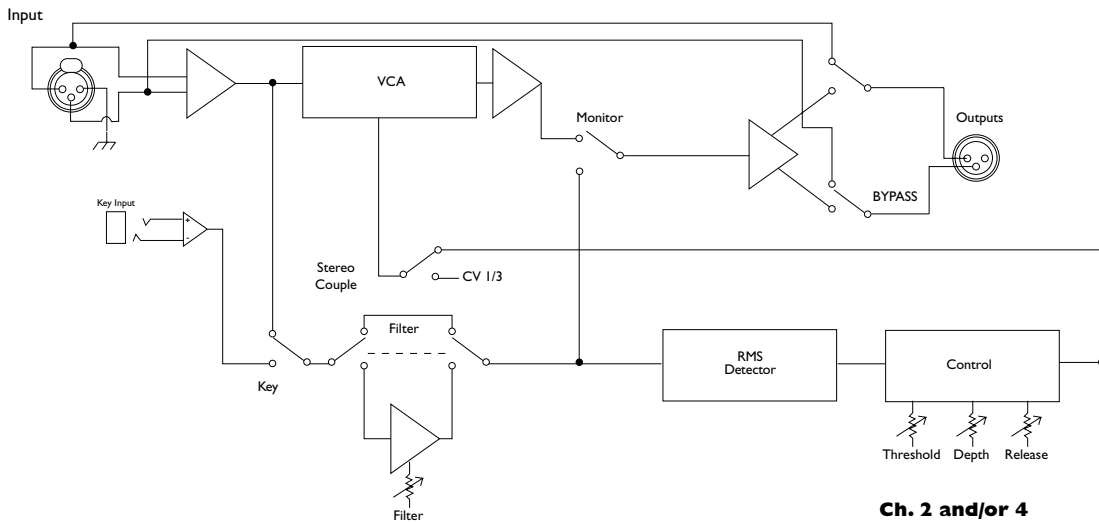
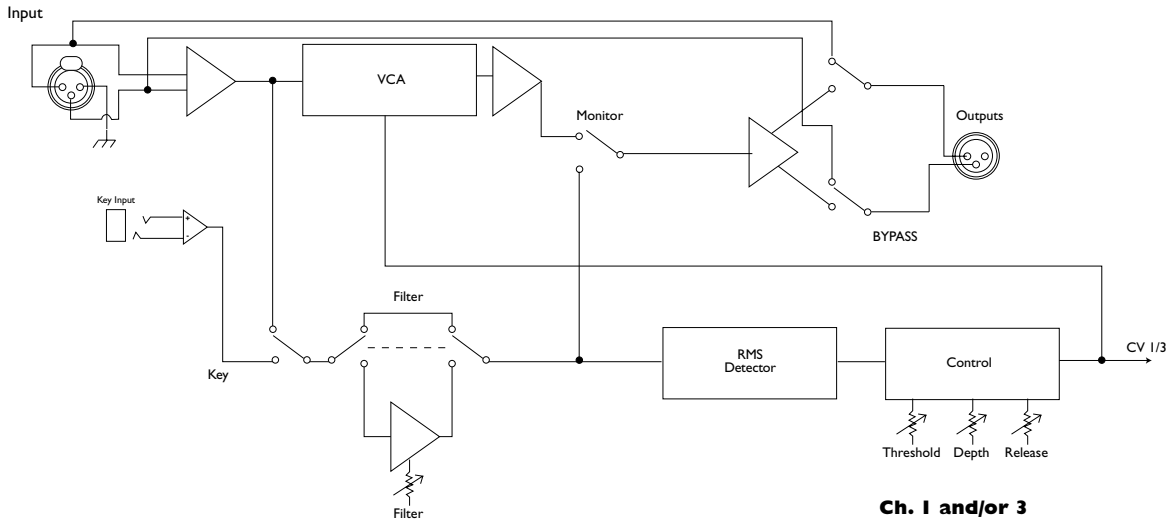
APPENDIX

BLOCK DIAGRAM
SPECIFICATIONS



Block diagram

1074 Block Diagram



Specifications

Input

Connectors:	XLR (Pin 2 and tip hot)
Type:	Electronically balanced/unbalanced, RF filtered
Impedance:	Balanced > 50 kOhm, unbalanced >25 kOhm
Max Input Level: >	+22 dBu balanced or unbalanced
CMRR:	40dB: Typically >55 dB at 1 kHz
Key Input:	Electronically balanced/unbalanced, RF filtered Balanced 50 kOhm, unbalanced >25 kOhm

Output

Connectors:	XLR (Pin 2 hot)
Type:	Servo-balanced/unbalanced, RF filtered
Impedance:	Balanced 60 Ohm, unbalanced 30 Ohm
Max Output Level:	> +22 dBm balanced, > +20 dBm unbalanced

System Performance

Bandwidth:	20 Hz to 20 kHz, +0/-0.5 dB
Frequency Response:	0.35 Hz to 200 kHz, +0/-3 dB
Noise:	< -96 dBu, unweighted, 22 kHz measurement bandwidth
Dynamic Range:	> 115 dB, unweighted
THD+Noise:	0.008% typical at +4 dBu, 1 kHz unity gain 0.08% typical at +20 dBu, 1 kHz, unity gain < 0.1% any amount of compression up to 40 dB, 1 kHz
Interchannel Crosstalk:	< -80 dB 20 Hz to 20 kHz
Stereo Coupling:	True RMS Power Summing

Power Supply

Operating Voltage:	Factory selected: 100-120 VAC 50-60 Hz or 200-240 VAC 50/60 Hz
Power Consumption:	30 Watts
Fuse:	100-120 VAC: T 300 mA L 250V 200-240 VAC: T 160 mA L 250V
Mains Connection:	IEC receptacle

Physical

Dimensions:	1.75"Hx19"Wx9"D (4.4cmx48.3cmx20.1cm)
Weight:	6.9 lbs.
Shipping Weight:	9.3 lbs.

Options

Output Transformer	
Per Channel:	Jensen® JT-123-dbx or BCI™ RE-123-dbx

Note: Specifications subject to change.

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Questions or comments?

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