

1074




Quad Noise Gate




User Manual

IMPORTANT SAFETY INSTRUCTIONS



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



ATTENTION: RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE

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 MUST BE EARTHED.

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 PLEASE READ THE FOLLOWING:

KEEP THESE INSTRUCTIONS

HEED ALL WARNINGS

FOLLOW ALL INSTRUCTIONS

DO NOT USE THIS APPARATUS NEAR WATER

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 manufacture, 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: The Power switch used in this piece of equipment DOES NOT break the connection from the mains.

ALL-POLE MAINS SWITCH: An all-pole mains switch with a contact separation of at least 3mm in each pole shall be incorporated in 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.

This Equipment is intended for rack mount use only.

IMPORTANT SAFETY INSTRUCTIONS

LITHIUM BATTERY WARNING

CAUTION!

This product may contain a lithium battery. There is danger of explosion if the battery is incorrectly replaced. Replace only with an Eveready CR 2032 or equivalent. Make sure the battery is installed with the correct polarity. Discard used batteries according to manufacturer's instructions.

ADVARSEL!

Lithiumbatteri - Eksplosjonsfare. Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten. Brukt batteri returneres apparatleverandøren.

ADVARSEL!

Lithiumbatteri - Eksplosjonsfare ved feilagtig håndtering. Utskiftning må kun ske med batteri av samme fabrikat og type. Levér det brukte batteri tilbake til leverandøren.

VAROITUS!

Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

WARNING!

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparatleverkaren. Kassera använt batteri enligt fabrikantens instruktion.

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.

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: dbx1074

Note: Product name may be suffixed by the letters -EU.
Product option: none

conforms to the following Product Specifications:

Safety: IEC 60065-98

EMC: EN 55013 (1990)
EN 55020 (1991)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 72/23/EEC and the EMC Directive 89/336/EEC as amended by Directive 93/68/EEC.

dbx Professional Products
Vice-President of Engineering
8760 S. Sandy Parkway
Sandy, Utah 84070, USA
August, 31, 2001

European Contact:

Your local dbx Sales and Service Office

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8760 South Sandy Parkway
Sandy, Utah 84070 USA
Ph: (801) 566-8800
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INTRODUCTION

INTRO

CUSTOMER SERVICE INFO
1074 DEFINED
WARRANTY INFO



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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.

1074

Section 1

Getting Started

Getting Started



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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.

Operating Level Switch

The operating output level allows you to select between either +4dBu or -10dBv output level.

Key Input Jack

The 1/4" TRS jack, will allow 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 available either independently for all four channels of the 1074, with the exception of the STEREO COUPLE button.

Filter Control - 80Hz to 8kHz

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

Filter - On/Off

Pressing the Filter button will engage the filter.

Key Input - On/Off

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

Stereo Couple

The Stereo couple button is used to select either Stereo or Dual mono modes on the 1074. To couple channels as stereo pairs, press the Stereo Couple 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, buttons 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 button out, each channels of the pair (1&2) or (3&4) function as two separate mono gates. Each channels has its own independent controls.

Stereo Couple LED

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

Threshold Control

Adjusting the 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 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.

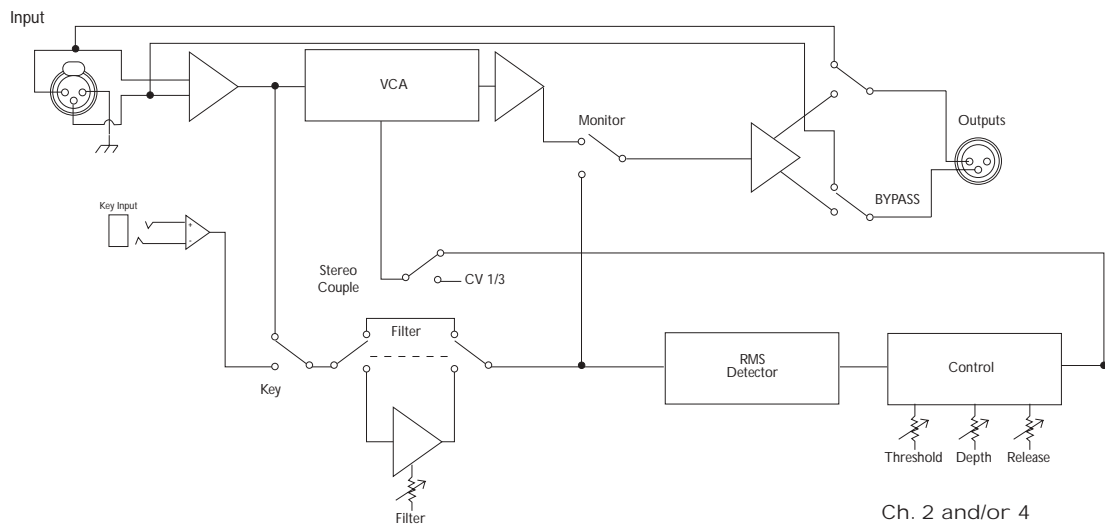
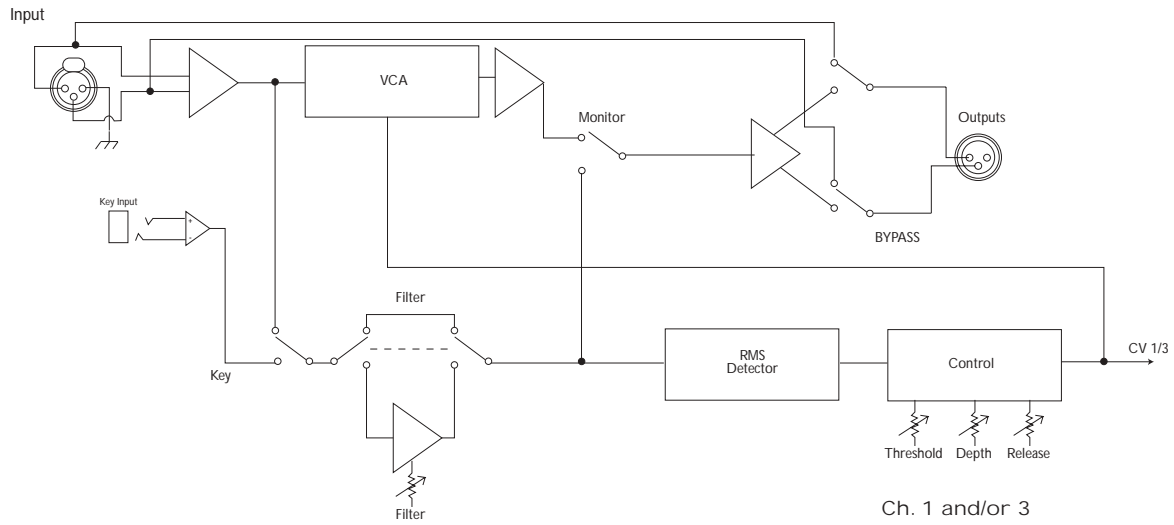
APPENDIX

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: | 100-120 VAC 50-60 Hz or 200-240 VAC 50/60 Hz |
| Power Consumption: | 30 Watts |
| Fuse: | 100-120 VAC:300 mA Slow Blow 200-240 VAC: 160 mA Type T |
| Mains Connection: | IEC receptacle |

Physical

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

Note: Specifications subject to change.



PROFESSIONAL PRODUCTS

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Questions or comments?

E-mail us at: customer@dbxpro.com

or visit our World Wide Web home page at:

www.dbxpro.com