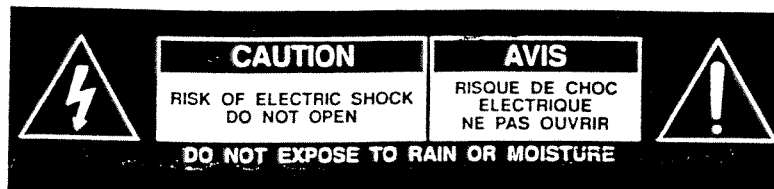


MODEL 274

Q U A D E X P A N D E R / G A T E





CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure — voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Read the manual.

Manufactured under one or more of the following U.S. patents: 3,377,792; 3,681,618; 3,714,462; 3,789,143; 4,097,767; 4,329,598; 4,403,199; 4,409,500; 4,425,551; 4,473,795. Other patents pending.

This dbx-branded product has been manufactured in the United States of America by AKG Acoustics, Inc.

AKG is a registered trademark of Akustische u. Kino-Geräte Ges m.b.H., Austria. AutoDynamic is a trademark of AKG Acoustics, Inc. dbx and OverEasy are registered trademarks of Carillon Electronics Corporation.

This manual is part number 96047-000-01

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dbx Professional Products

a division of AKG Acoustics, Inc.

1525 Alvarado Street, San Leandro, CA 94577 USA

Telephone (1) 510/351-3500 Fax: (1) 510/351-1001

IMPORTANT SAFETY INSTRUCTIONS

All the safety and operating instructions should be read before the appliance is operated.

Retain Instructions: The safety and operation instructions should be retained for future reference.

Heed Warnings: All warnings on the appliance and in the operating instructions should be adhered to.

Follow Instructions: All operation and user instructions should be followed.

Water and Moisture: The appliance should not be used near water (e.g., near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.).

Ventilation: The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Heat: The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

Power Sources: The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

Grounding or Polarization: Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

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 appliance.

Cleaning: The appliance should be cleaned only as recommended by the manufacturer.

Non-use Periods: The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

Object and Liquid Entry: Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

Damage Requiring Service: The appliance should be serviced by qualified service personnel when:

The power supply cord or the plug has been damaged; or

Objects have fallen, or liquid has been spilled into the appliance; or

The appliance has been exposed to rain; or

The appliance does not appear to operate normally or exhibits a marked change in performance; or

The appliance has been dropped, or the enclosure damaged.

Servicing: The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

The Appliance should be used only with a cart or stand that is recommended by the manufacturer.

Safety Instructions (European)

Notice For U.K. 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, (\perp), 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.



The power cord is terminated in a CEE7/7 plug (Continental Europe). The green/yellow wire is connected directly to the unit's chassis. If you need to change the plug and if you are qualified to do so, refer to the table below.

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.

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

AC Power Cord Color Coding

Safety Instructions (German)

Gerät nur an der am Leistungsschild vermerkten Spannung und Stromart betreiben.

Sicherungen nur durch solche, gleicher Stromstärke und gleichen Abschaltverhaltens ersetzen. Sicherungen nie überbrücken.

Jedwede Beschädigung des Netzkabels vermeiden. Netzkabel nicht knicken oder quetschen. Beim Abziehen des Netzkabels den Stecker und nicht das Kabel erfassen. Beschädigte Netzkabel sofort auswechseln.

Gerät und Netzkabel keinen übertriebenen mechanischen Beanspruchungen aussetzen.

Um Berührung gefährlicher elektrischer Spannungen zu vermeiden, darf das Gerät nicht geöffnet werden. Im Fall von Betriebsstörungen darf das Gerät nur von befugten Servicestellen instandgesetzt werden. Im Gerät befinden sich keine, durch den Benutzer reparierbare Teile.

Zur Vermeidung von elektrischen Schlägen und Feuer ist das Gerät vor Nässe zu schützen. Eindringen von Feuchtigkeit und Flüssigkeiten in das Gerät vermeiden.

Bei Betriebsstörungen bzw. nach Eindringen von Flüssigkeiten oder anderen Gegenständen, das Gerät sofort vom Netz trennen und eine qualifizierte Servicestelle kontaktieren.

Safety Instructions (French)

On s'assurera toujours que la tension et la nature du courant utilisé correspondent bien à ceux indiqués sur la plaque de l'appareil.

N'utiliser que des fusibles de même intensité et du même principe de mise hors circuit que les fusibles d'origine. Ne jamais shunter les fusibles.

Eviter tout ce qui risque d'endommager le câble seceur. On ne devra ni le plier, ni l'aplatir. Lorsqu'on débranche l'appareil, tirer la fiche et non le câble. Si un câble est endommagé, le remplacer immédiatement.

Ne jamais exposer l'appareil ou le câble à une contrainte mécanique excessive.

Pour éviter tout contact avec une tension électrique dangereuse, on n'ouvrira jamais l'appareil. En cas de dysfonctionnement, l'appareil ne peut être réparé que dans un atelier autorisé. Aucun élément de cet appareil ne peut être réparé par l'utilisateur.

Pour éviter les risques de décharge électrique et d'incendie, protéger l'appareil de l'humidité. Eviter toute pénétration d'humidité ou fr liquide dans l'appareil.

En cas de dysfonctionnement ou si un liquide ou tout autre objet a pénétré dans l'appareil couper aussitôt l'appareil de son alimentation et s'adresser à un point de service après-vente autorisé.

Safety Instructions (Spanish)

Hacer funcionar el aparato sólo con la tensión y clase de corriente señaladas en la placa indicadora de características.

Reemplazar los fusibles sólo por otros de la misma intensidad de corriente y sistema de desconexión. No poner nunca los fusibles en puente.

Proteger el cable de alimentación contra toda clase de daños. No doblar o apretar el cable. Al desenchufar, asir el enchufe y no el cable. Sustituir inmediatamente cables dañados.

No someter el aparato y el cable de alimentación a esfuerzo mecánico excesivo.

Para evitar el contacto con tensiones eléctricas peligrosas, el aparato no debe abrirse. En caso de producirse fallos de funcionamiento, debe ser reparado sólo por talleres de servicio autorizados. En el aparato no se encuentra ninguna pieza que pudiera ser reparada por el usuario.

Para evitar descargas eléctricas e incendios, el aparato debe protegerse contra la humedad, impidiendo que penetren ésta o líquidos en el mismo.

En caso de producirse fallos de funcionamiento como consecuencia de la penetración de líquidos u otros objetos en el aparato, hay que desconectarlo inmediatamente de la red y ponerse en contacto con un taller de servicio autorizado.

Safety Instructions (Italian)

Far funzionare l'apparecchio solo con la tensione e il tipo di corrente indicati sulla targa riportante i dati sulle prestazioni.

Sostituire i dispositivi di protezione (valvole, fusibili ecc.) solo con dispositivi aventi lo stesso amperaggio e lo stesso comportamento di interruzione. Non cavallottare mai i dispositivi di protezione.

Evitare qualsiasi danno al cavo di collegamento alla rete. Non piegare o schiacciare il cavo. Per staccare il cavo, tirare la presa e mai il cavo. Sostituire subito i cavi danneggiati.

Non esporre l'apparecchio e il cavo ad esagerate sollecitazioni meccaniche.

Per evitare il contatto con le tensioni elettriche pericolose, l'apparecchio non deve venir aperto. In caso di anomalie di funzionamento l'apparecchio deve venir riparato solo da centri di servizio autorizzati. Nell'apparecchio non si trovano parti che possano essere riparate dall'utente.

Per evitare scosse elettriche o incendi, l'apparecchio va protetto dall'umidità. Evitare che umidità o liquidi entrino nell'apparecchio.

In caso di anomalie di funzionamento rispettivamente dopo la penetrazione di liquidi o oggetti nell'apparecchio, staccare immediatamente l'apparecchio dalla rete e contattare un centro di servizio qualificato.

INSPECTION

1. Verify that the 274 package contains the following:

- ☐ 274 Unit and External Power Supply
- ☐ Operation Manual (including Registration Card)

2. Please complete the Registration Card, detach it from the manual and return it.

INTRODUCTION

Congratulations on choosing the dbx 274 Quad Expander/Gate. The 274 provides traditional dbx sonic quality and performance for the working musician, DJ, studio operator or anyone who needs a friendly, flexible device to achieve quality gating and downward expansion quickly and easily. We recommend that you take a moment and read through the manual as it provides information that will assist you in using your unit to its fullest potential.

The Quad Expander/Gate is ready to tackle all your gating needs, whether you need to remove unwanted noise or other background sounds, tighten drum sounds, or change the characteristic envelope of an instrument. The 274 is more flexible than most quad gates because it offers you a choice of hard gating or downward expansion on each of its four channels. Use the gate for high transient material such as percussion and the expander for vocals, mixed program or any "soft attack" type material.

Applications:

- ☐ Gating Dry Percussive Sounds (e.g., Snare Drum, Kick Drum)
- ☐ Gating Sounds That Have Longer Decay (e.g., Cymbal, Piano)
- ☐ Gating Hum or Buzz From Live Instruments or Recorded Tracks
- ☐ Downward Expansion to Reduce Noise Under Smooth Sounds (e.g., Vocals, Woodwinds)

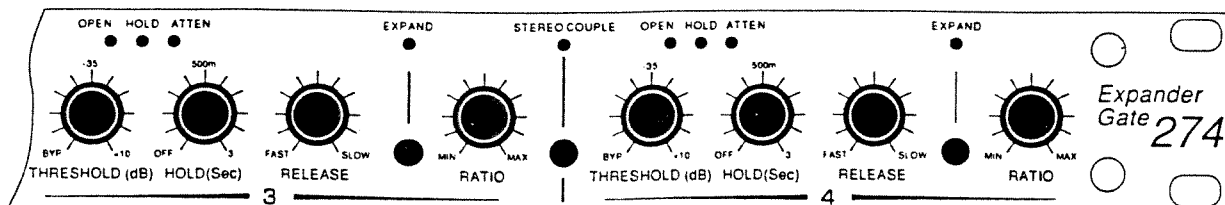
The 274 can accomplish many other changes to sound quality. We recommend that you experiment with the 274's controls and try different settings. You might be surprised at what you hear. Best of all, you may create the perfect sound quality for your needs.

Features:

- ☐ Four independent channels of user-selectable expansion or gating controls in any combination: four mono, 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.
- ☐ 3 LED Threshold status indicators per channel aid in fast, accurate setup.
- ☐ Balanced inputs; stereo couple for channels 1 & 2 and 3 & 4.
- ☐ Side Chain inserts allow external keying.

OPERATING CONTROLS

Front Panel



Note: The following controls are available independently for all four channels of the 274 Expander/Gate (except for the STEREO COUPLE button — see below).

STEREO COUPLE Button and LED This button sets the 274 for Stereo Mode or Dual Mono Mode. To couple channels as stereo pairs (e.g., [1 & 2], [3 & 4]), press in the STEREO COUPLE buttons between each pair. When you do, the odd-numbered channel (1 or 3) becomes the master and the even-numbered channel (2 or 4) becomes the slave. The slave channel's controls, buttons and LEDs will be disabled and control for both channels of the pair is via the master channel's controls.

In Expand Mode, true power summing of each pair's detectors is achieved; in Gate Mode, only a signal detected at the odd-numbered channel (1 or 3) INPUT or SIDE CHAIN can open the two gates.

With the STEREO COUPLE button out, each channel of the pair ([1 & 2] or [3 & 4]) function as two separate mono expander/gates, each with its own independent controls.

The red STEREO COUPLE LED indicates that the two channels are stereo-coupled.

EXPAND Button and LED: Pressing this button in sets the channel to Expand Mode, producing a smooth knee downward expansion characteristic. In this mode, both HOLD and RELEASE controls are disabled, and replaced by very fast program-dependent attack and release times. This allows the channel's expander to closely follow the INPUT or SIDE CHAIN signal's envelope. Only the channel's THRESHOLD and RATIO controls are active.

With the EXPAND button out, the channel functions as a Gate, with HOLD and RELEASE controls, as well as THRESHOLD and RATIO.

The green EXPAND LED indicates that the channel is set to Expand Mode.

THRESHOLD Control and LEDs (OPEN/HOLD/ATTEN): 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 counterclockwise (to BYPASS) 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 RATIO control.

The OPEN, HOLD and ATTEN LEDs indicate the relationship of the INPUT or SIDE CHAIN signal level to the threshold setting. The green OPEN LED lights when the signal is above threshold. When the HOLD function is used, the yellow HOLD LED turns on as soon as the INPUT or SIDE CHAIN signal level falls below the set threshold level. The HOLD LED will remain lit until the HOLD function has completely timed out. The red ATTEN LED lights when the signal is BELOW threshold and the HOLD function has completely timed out.

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

In Expand Mode, RATIO establishes the final slope of the smooth knee downward expansion characteristic and ranges from about 1.3:1 (fully counterclockwise, set to MIN) to 4:1 (fully clockwise, set to MAX), with a 12 o'clock position of about 2.5:1. If a setting produces undesirable "pumping," readjust the RATIO or THRESHOLD setting. Higher ratio settings will provide a very fast gate which will open with a gentler slope than the Gate Mode, and provide automatic release times.

Note: The attack and release rate of the Expander are program-dependent — very fast for transient material (e.g., percussion) and slower for material with slow attack (e.g., vocals).

In Gate Mode, RATIO acts as a gate depth control and ranges from 0dB (fully counterclockwise, set to MIN) to >60dB (fully clockwise, set to MAX). For most applications, set this control to MAX.

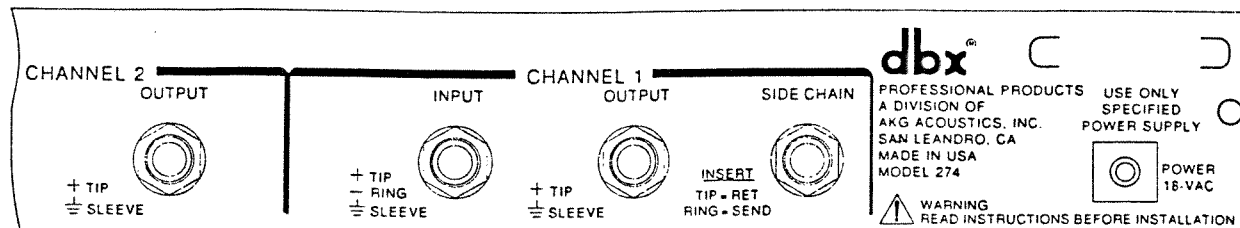
HOLD Control and LED (Gate Mode only): Adjusting the HOLD control sets the amount of time that the gate remains open after the INPUT or SIDE CHAIN signal falls below threshold. The range is from OFF (fully counterclockwise) to 3 seconds (fully clockwise), with a 12 o'clock position of approximately 500mSec. For most applications, start with the HOLD and RELEASE controls set to 12:00 and adjust to taste.

When the HOLD function is used, the yellow HOLD LED turns on as soon as the INPUT or SIDE CHAIN signal level falls below the set threshold level. The HOLD LED will remain lit until the HOLD function has completely timed out.

RELEASE Control (Gate Mode only): Adjusting the RELEASE control sets how fast the gate closes once the INPUT or SIDE CHAIN signal level falls below threshold and the HOLD function has timed out. The RELEASE rate is from FAST (fully counterclockwise) to SLOW (fully clockwise). For most applications, start with the HOLD and RELEASE controls set to 12:00 and adjust to taste.

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

Rear Panel



INPUT Jacks (CHANNEL 1, 2, 3 and 4): Use 1/4" phone plugs to connect these inputs to your source. The 274's INPUT jacks accept either balanced or unbalanced signals. Nominal input level is +0dBu and clipping level is +20dBu. Input impedance is 100kΩ.

OUTPUT Jacks (CHANNEL 1, 2, 3 and 4): The OUTPUT jacks accept 1/4" phone plugs. Nominal output signal level is +0dBu into 600Ω, and typical maximum output signal level is +20dBu into 600Ω. Output impedance is 47Ω. The outputs are single-ended (or unbalanced), Tip Hot.

SIDE CHAIN Jack: This jack is provided for channels 1 and 3 only (refer to STEREO COUPLE button). The SIDE CHAIN jack provides a connection to the 274 detector path. The RING acts as a Send, carrying a buffered version of the signal present at the 274 INPUT jack, at an impedance of 2kΩ. The TIP acts as a Return for equipment to feed the 274's detector circuitry, such as an equalizer for frequency-sensitive gating. You can also drive the 274 Side Chain input with the output of most equipment, by using a 1/4" mono phone plug. This would be acting as an External Key input. Input Impedance is greater than 10kΩ.

Note: When a cable is plugged into this jack, it automatically breaks the connection from the INPUT jack to the 274's detection circuitry. (You will still hear the signal at the INPUT jack, but the signal at the SIDE CHAIN insert controls the gate.)

AC Power Supply Jack Plug the AC Power Supply (shipped with your unit) into this jack and an appropriate AC power source. Note that the 274 does not have a power button. It is recommended that the 274 be "On" at all times. Power consumption is low. If you do not plan to use the 274 for an extended period of time, unplug it.



WARNING: Be sure to verify your actual line voltage is the same as the voltage level printed on the power supply. Connection to an inappropriate power source may result in extensive damage which is not covered by the warranty.

OPERATING NOTES

Gating and Expansion

274 Gate

A Gate is essentially a device that controls the level of an input signal by "opening" and "closing." A user-selected level, called *Threshold*, helps determine when the gate opens and closes.

If the input signal is above the threshold, the gate is "open," allowing the signal to pass. If the input signal is below the threshold, the gate "closes" and the input signal is attenuated. With sufficient attenuation, it effectively cuts that signal off. (On the 274, the "amount of attenuation," sometimes referred to as the gate's "depth," is set with the RATIO control. Note that some applications may require the RATIO to be set at less than maximum.)

The 274's HOLD and RELEASE controls affect the actual timing of the attenuation. As the signal decays or stops and passes below the threshold, a HOLD timer starts, keeping the gate open for the user-selected period. When the HOLD time has expired, the gate closes (or attenuates the signal) at the user-selected RELEASE rate.

274 Downward Expander

With the 274's Expander selected, if an input signal exceeds the user-selected threshold, signals pass unaffected. When part of the input signal is below threshold, that part is downward expanded. (On the 274, the amount of downward expansion is set by the RATIO control.) For example, with a THRESHOLD setting of -10dB and a ratio of 3:1, the part of the input signal that is at -20dB (10dB below threshold) will be pushed farther below the threshold at a 3:1 ratio, so it becomes -40dB (30dB below threshold). This type of process works well for continually removing undesired signals from "underneath" the desired ones, whereas a gate specializes in removing unwanted signals from "between" desired ones.

Notes: Too high of a THRESHOLD setting on an expander may cause it to attenuate the desired portion of the signal, as well as the undesired portion. Too high of a RATIO setting may cause undesirable effects with highly modulated program like vocals. But, with higher RATIO settings, an expander can act like a gate and close off when low level or no signal is present. The 274 Expander's RELEASE time is automatic and program-dependent.

Gating Dry Percussive Sounds (e.g., Snare Drum, Kick Drum)

To effectively gate percussive sounds with a high level transient, you need to set the 274's gate to open and close quickly enough to ensure that the gate is less sensitive to nearby signals that would cause the gate to open or "false trigger."

Set the RELEASE setting fast enough to enable the gate to close very quickly once the signal falls under the THRESHOLD. Use the HOLD control (in combination with RELEASE) to shape the envelope of the sound.

Note: Fast gating of sustained low frequency signals can result in "chattering." Because the 274 is capable of extremely fast gating, make sure the combined HOLD and RELEASE times are longer than one full cycle of the gated signal's fundamental frequency. To eliminate any "chattering," simply adjust either the HOLD or RELEASE times to a longer time or slower rate. The proper THRESHOLD setting will also minimize false triggering and "chattering."

These type of settings are most useful for tightening up drum tracks, removing the "ring" from some drums, or gating out the leakage of one drum through another's mic.

Gating Sounds That Have Longer Decay (e.g., Cymbal, Piano)

To effectively gate sounds which have more decay after the initial transient, select HOLD and RELEASE controls slow enough to allow the gate to remain open and capture the signal's entire envelope.

The HOLD control is especially useful when set to allow a piano or guitar to fade naturally without truncating the signal or when set to capture the natural ring or reverb as it is trailing off after an initial percussive drum hit. In either case, in order to capture the entire envelope naturally, it will be necessary to use the RELEASE control in conjunction with the HOLD control.

The gate can also be used to "dry up" a track or mix that has too much reverb or ambience. Set the HOLD and RELEASE controls so that the natural decay of the sound is somewhat truncated.

Note: Using a longer HOLD time with a shorter RELEASE time can create some interesting special effects.

Reducing Noise Under Smooth Sounds (Vocals, Woodwinds)

To use the 274's Expander to reduce noise under smooth sounds like vocals and wind instruments, first make sure the front panel EXPAND button is pressed in. Then set the THRESHOLD level so that most of the program is above the THRESHOLD and therefore unaffected, while background noise is downward expanded at whatever RATIO is selected.

Note: The higher the THRESHOLD setting the more the program will be downward expanded. Unnatural dynamic effects can be created this way. If high ratios are used, the effect is very much like gating.

Expansion can sometimes be difficult to get just right. Be patient. Often a small adjustment makes the difference. Remember, adjusting the controls to taste will help you get your sound.

Using the SIDE CHAIN as an External Key

Key inputs allow external triggering or keying of a gate. The 274's gates can be keyed in such a manner, via their SIDE CHAIN jacks.

The signal fed to the input of the gate can also be fed to an equalizer which is connected to the SIDE CHAIN. With the equalizer adjusted so that only the desired signal is strong at the SIDE CHAIN, the gate will become even more selective in gating out the undesired sounds.

The SIDE CHAIN can also be used to add dynamics to a sound. For example, create two channels of bass guitar for your mix. Feed one channel directly into the mix and the other into the gate. Then key the gate with a signal from the kick drum (inserted into the SIDE CHAIN input — adjust controls as needed). The gated bass track will now open with each kick, adding punch and dynamics. This can really tighten up the tracks and add life to the mix.

CONNECTING THE 274 TO YOUR SYSTEM

Basic Connection

The 274 can be used with any line-level device. Some common examples include mixing consoles, electronic musical instruments, patch bays, and signal processors.

For all connections, refer to the following steps:

1. Turn Off all equipment before making any connections.
2. Mount the 274 in a 1U rack space (optional).



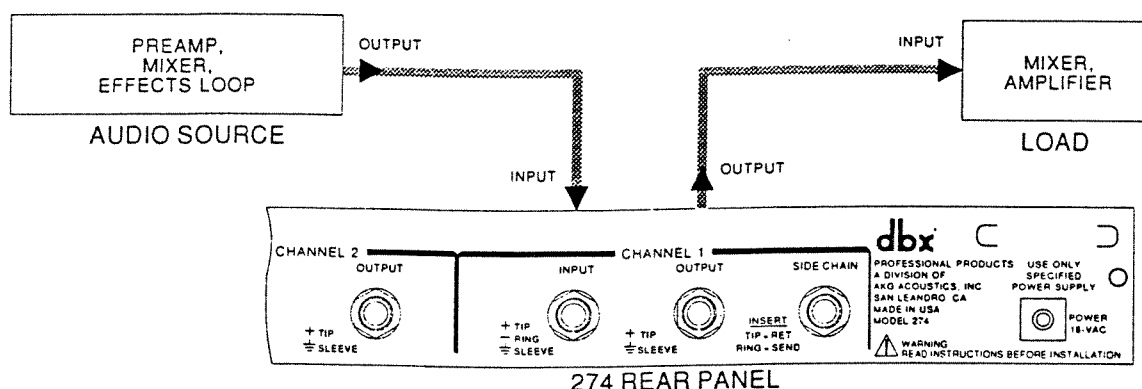
The 274 requires 1 rack space (height) and 1 rack space (width). It can be mounted above or below anything that doesn't generate excessive heat; it requires no special ventilation. Ambient temperatures should not exceed 113°F (45°C) when equipment is powered.

Note: Avoid over-tightening of rackmounting screws as this could damage the front panel.

Caution: Never remove the cover. There are no user-serviceable parts inside.

3. Make connections via 1/4" phone jacks according to your requirements.
4. Connect the AC power supply (shipped with the unit) to the 274's rear panel POWER jack and an appropriate AC power source.

Note: Check the line voltage (printed on the power supply) and verify that it is correct.



TECHNICAL SUPPORT, FACTORY SERVICE

Technical Support, Factory Service

The 274 is an all-solid-state product with components chosen for high performance and excellent reliability. Each 274 is tested, burned in and calibrated at the factory and should require no internal adjustment of any type throughout the life of the unit. We recommend that your 274 be returned to the factory only after referring to the manual and consulting with Customer Service.

Our phone number, Fax number and address are listed on the inside front cover. When you 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.

Note: Please refer to the terms of your Limited Two-Year Standard Warranty, which extends to the first end-user. After the warranty expires, 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 shipping charges to the factory. dbx will pay return shipping if the unit is still under warranty.

Shipping Instructions: 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.

SPECIFICATIONS

Note: 0dBu = 0.775VRMS

Specifications are subject to change.

Frequency Response Flat Bandwidth	5Hz - 40kHz, +0, -0.5dB 0.35Hz - 170kHz, +0, -3dB
Input (Balanced or Unbalanced) Impedance Max Level	100k Ω +20dBu
Output Impedance Max Level	47 Ω +20dBu into 600 Ω
Side Chain Insert Input Impedance Output Impedance Max Level	>10k Ω \leq 2k Ω +22dBu
Distortion + Noise Intermodulation Distortion Noise	<0.02%: 1kHz @ 0dBu <0.2% SMPTE <-92dBu, unweighted (20Hz - 20kHz, Bandwidth only)
Dynamic Range	>112dB, unweighted
Crosstalk	<-90dBu @ 1kHz
Common Mode Rejection	>45dB (Any Frequency)
Stereo Coupling	[Channels 1 & 2] and [Channels 3 & 4]
Threshold Range Characteristic	-Infinity to +10dBu Hard Knee (Gate) and OverEasy (Expansion)
Gate Attenuation	Adjustable 0 to >60dB
Expansion Ratio	Adjustable 1:1 to 4:1
Attack Time	<100 μ Sec
Gate Hold Time	Adjustable 0 to 3 seconds
Gate Release Time	Adjustable 50ms to 3 seconds
Power Requirements Operating Temperature	AC provided by external power supply included with unit. 0°C to 45°C (32°F to 113°F)
Dimensions (H x D x W) Weight	1.75" x 4" x 19" (4.45cm x 10.16cm x 48.5cm) Net Weight: 5 lbs (2.3 kg); Shipping Weight: 7 lbs (3.2 kg)

SCHEMATICS

Schematics for the 274 are provided in the 274 Service Manual, available from our Customer Service Department for a nominal fee.

United States Warranty

Limited Warranty

This warranty is valid only for the original purchaser and only in the United States. We warrant dbx products against defects in material or workmanship for a period of two years from the date of original purchase for use, and agree to repair or, at our option, replace any defective item, except external power transformers, without charge for either parts or labor.

IMPORTANT: This warranty does not cover damage resulting from accident, misuse or abuse, lack of reasonable care, the affixing of any attachment not provided with the product, loss of parts, or connecting the product to any but the specified receptacles. This warranty is void unless service or repairs are performed by an authorized service center. No responsibility is assumed for any special, incidental or consequential damages. However, the limitation of any right or remedy shall not be effective where such is prohibited or restricted by law.

Simply take or ship your dbx product prepaid to our service department. Be sure to include your sales slip as proof of purchase date. (We will not repair transit damage under the no-charge terms of this warranty.) dbx will pay return shipping.

NOTE: No other warranty, written or oral is authorized for dbx products.

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 of limitations of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusion and limitations may not apply to you.

International Warranty

Bedingungen

dbx gewährt 2 Jahre Garantie ab Verkaufsdatum auf nachweisbare Material- und Fabrikationsfehler (ausgenommen externe Netzgeräte). Der Garantieanspruch erlischt bei unsachgemäßer Handhabung, elektrischer oder mechanischer Beschädigung durch mißbräuchliche Anwendung sowie bei unsachgemäßer Reparatur durch nichtautorisierte Werkstätten. Zur Inanspruchnahme der angeführten Garantieleistung ist der Nachweis des Kaufes (ordentliche Rechnung des Verkäufers erforderlich). Transport- und Portospesen, welche aus der Einsendung des Gerätes zur Garantiereparatur erwachsen, können von dbx nicht übernommen werden, das Risiko der Zusendung trägt der Kunde. Die Garantie wird ausschließlich für den ursprünglichen Käufer geleistet.

Warranty Conditions

dbx warrants dbx products (except for external power transformers) against evident defects in material and workmanship for a period of two years from the date of original purchase for use. This warranty does not cover damage resulting from misuse or abuse, or lack of reasonable care, and inadequate repairs performed by unauthorized service centers. Performance of repairs or replacements under this warranty is subject to proof of purchase. Shipment of the defective item for repair under this warranty will be at the customer's own risk and expense. This warranty is valid for the original purchaser only.

Conditions de garantie

Pour toute mise en œuvre de garantie ou de service après-vente, vous devez vous adresser à votre revendeur. Notre société assure au revendeur le remplacement gratuit des pièces détachées nécessaires à la réparation pendant deux ans, à partir de la date de votre facture, sauf en cas de non respect des prescriptions d'utilisation ou lorsqu'une cause étrangère à l'appareil est responsable de la défaillance. Cette garantie n'est pas appliquée pour les transformateurs externes. Les dispositions stipulées ci-dessus ne sont pas exclusives du bénéfice au profit de l'acheteur de la garantie légale pour défaut et vice cachés qui s'applique, en tout état de cause, dans les conditions des articles 1641 et suivants du Code Civil.

Condizioni di garanzia

L'dbx presta garanzia per due anni dalla data della vendita per difetti di materiale e fabbricazione che possono essere provati. Il diritto di garanzia cessa in caso di manipolazione impropria, danneggiamento elettrico o meccanico attraverso l'uso non appropriato e riparazione inesperta eseguita da officine non autorizzate. E' indispensabile, per la prestazione della garanzia, presentare la carta di garanzia debitamente riempita dal rivenditore autorizzato e la fattura di vendita. Spese di trasporto che risultano dall'invio dell'impianto per la riparazione in garanzia, non possono essere assunte dall'dbx l'invio è a rischio e pericolo del cliente. La garanzia verrà data solo al primo acquirente.

Condiciones de garantía

dbx concede dos años de garantía (menos fuentes de poder exteriores) por defectos comprobables de material o de fabricación a partir de la fecha de venta. El derecho de garantía caduca en caso de procederse a una manipulación inadecuada en caso de producirse daño eléctrico o mecánico por uso indebido, así como también en caso de reparaciones inadecuadas por parte de talleres no autorizados. La prestación de la garantía está sujeta a la presentación de la factura de compra. dbx no asume ningún gasto de transporte o correo incurrido por el envío del aparato defectuoso para la reparación bajo garantía; el riesgo del envío ha de ser asumido por el cliente. La garantía se concede única y exclusivamente al comprador original.