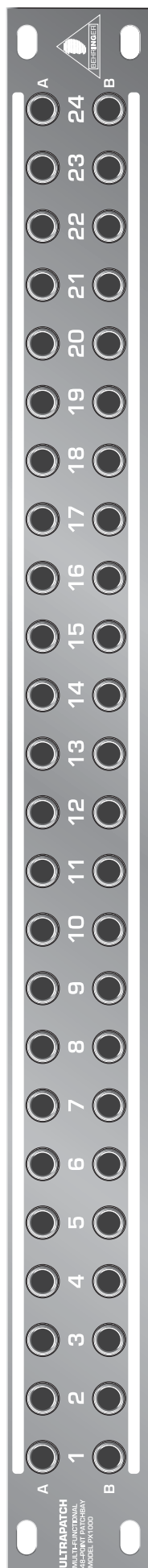


ULTRAPATCH

PX1000



www.behringer.com

User's Manual

Version 1.1 March 2003



ENGLISH

ULTRAPATCH PX1000

Welcome to the BEHRINGER family!

Thank you very much for expressing your confidence in BEHRINGER products by purchasing the ULTRAPATCH PX1000. The PX1000 is a multi-functional balanced 48-point patchbay for studio and stage applications.

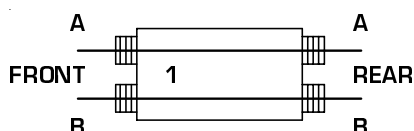
A patchbay allows you to patch the audio signals of most components in your studio from a central point and send them to other units, making your entire cabling better structured and optimally suited for professional work. If you want to use your studio as effectively as possible, it is preferable to use a complete patchbay wiring scheme, but even smaller studio configurations will benefit from less complex patchbay configurations.

1. PATCHBAY CONFIGURATION

The majority of commercially available patchbays include two rows of 24 phone jacks in a single 19" rack panel. On the rear, either a corresponding number of phone jacks or contacts for soldering signal leads can be found. Each group of four phone jacks forms one module. The configuration of some patchbays can be changed by inserting jumpers or turning individual modules.

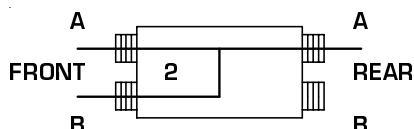
With the BEHRINGER ULTRAPATCH PX1000 you own an easy-to-use 48-point patchbay offering 1/4" TRS connectors, that can be operated in five different modes simply by aligning the modules manually. For this purpose, simply loosen the two lower front screws to remove the front panel.

1.1 Mode 1



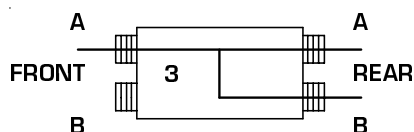
In this mode, when all jacks of the module are inserted, the audio signals A and B will go separately from front to rear. For example, you may use this mode to connect mixer outputs to compressor inputs or compressor outputs to tape inputs.

1.2 Mode 2



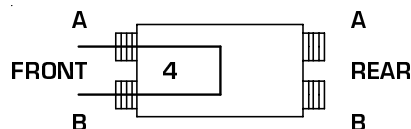
In this mode, the contacts of jacks A & B on the front are interconnected. When you insert a plug into the upper rear jack (A), the signal routed through the front path is not interrupted. Only when the lower rear jack (B) is used will the front panel route be split, so that the two upper and the two lower jacks are connected to one another. This configuration is called "input break" and is used mainly for insert applications.

1.3 Mode 3



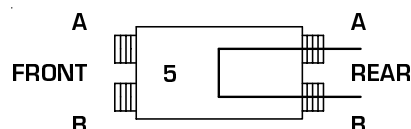
Here, the contacts of jacks A & B on the rear are interconnected. When you insert a plug into the upper front jack (A), the signal routed through the rear path is not interrupted and the audio source of front A is parallel to the rear jacks (A & B). Thus, two power amplifiers may, for example, share one audio source.

1.4 Mode 4



In this configuration, the contacts of jacks A & B on the front are interconnected. Thus, the upper front jack (A) receives an incoming signal and the lower front jack (B) sends the outgoing signal. With this mode, you can take the signal from lower front jack (B) for recording purposes or the connection to additional equipment.

1.5 Mode 5



Here, the contacts of jacks A & B on the rear are interconnected. The configuration is the same as in mode 4. However, in contrast to mode 4, this mode is usually deployed for equipment in a fixed installation. For example, most recording studios have the mixer's outputs connected to the recorder's inputs most of the time. It is very convenient to have the signal path through the patchbay in this manner, with the permanent connections made at the rear. This also allows you to intercept, divert or replace the signal easily at the front of the patchbay in a number of ways by inserting a plug into one of the front jacks (A or B).

2. LOOMING PROBLEMS

Loom wiring is an art in itself, and it is worth the time to get it right. First, it is important to avoid ground loops (a looped wire acts like an antenna, picking up hum and electromagnetic radiation). Think of a tree. Every part of that tree is connected to every other part, but only by one route. That's how the total grounding picture for your entire studio should look. Don't remove the ground connection of your mains cable plug to reduce audible 50/60 Hz mains hum. Instead, you should disconnect the signal shield somewhere (one or several audio cables) in the signal chain.

It is good practice to ensure that all screens are commoned at the patchbay, in which case all equipment would be grounded from this point via a single screen (more than one route = an earth loop), while mains-earthed equipment would have all screens cut at the equipment end.

Some equipment has an independent signal and mains grounding. In this case, at least one screen should ground the equipment. Sometimes, the only way to find out is "suck and see".

Please assure that using the patchbay does not disturb the studio's grounding architecture. Always use patch leads that are as short as possible with the screen connected at both ends.

After removing the mains hum from the system, make up your cable looms from the patchbays outwards, and use cable ties, flexible sheaths, multicores, etc. to keep the back of your racks orderly.

3. CAUTIONS

Avoid routing digital signals near a patchbay because the pulse signal used for the transmission of such signals causes heavy interference in analog signals. Additionally, normal patchbays change the impedance of the digital cable route, which causes interference in the digital path. Use the BEHRINGER ULTRAPATCH PRO SRC2496 specifically designed for this and other digital signal-related functions.

Microphone inputs operate at a level several orders of magnitude lower than line levels (+4 dBu or -10 dBV). Therefore, they should never be routed via a patchbay. In any case, patching in a field with +48 V DC (phantom power) is to be avoided at all costs. It is best to plug mics directly into the mixing console or via special XLR type wall boxes connected to the mic inputs of the console using good quality balanced multicore cables.

4. LABELLING

With so many patch points in use at any one time, you will probably never be able to keep track of them without labelling. Your BEHRINGER ULTRAPATCH PX1000 features white labels above the upper jacks and white labels below the lower jacks for the purpose of labelling. When labelling, it is advisable not to use permanent markers as you may want to re-label, if you decide to re-configure your patchbay signal routing again.

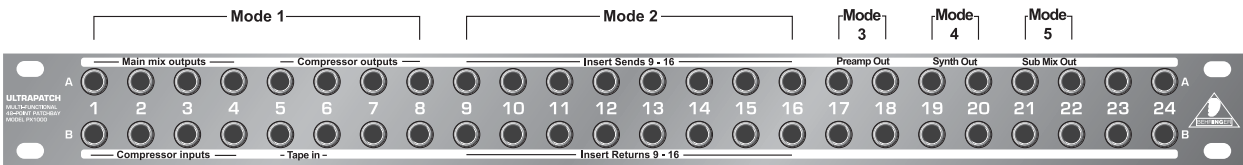
5. PATCHBAY ORGANIZATION

Attached is an example configuration that shows how you can use your patchbay. This is only an example to illustrate the use of your PX1000. Depending on your application, you may need several PX1000s. It should be noted that patchbays should be placed one below the other in such a way that the patch cords don't hang carelessly over the patchbays.

6. SPECIFICATIONS

Height	1 3/4" (44.5 mm)
Width	19" (482.6 mm)
Depth	2 3/4" (69.3 mm)
Weight	approx. 1.3 kg (2 7/8 lbs)
Connectors	1/4" TRS balanced

BEHRINGER is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or shown.



7. WARRANTY

§ 1 WARRANTY CARD/ONLINE REGISTRATION

To be protected by the extended warranty, the buyer must complete and return the enclosed warranty card within 14 days of the date of purchase to BEHRINGER Spezielle Studiotechnik GmbH, in accordance with the conditions stipulated in § 3. Failure to return the card in due time (date as per postmark) will void any extended warranty claims. Based on the conditions herein, the buyer may also choose to use the online registration option via the Internet (www.behringer.com or www.behringer.de).

§ 2 WARRANTY

1. BEHRINGER (BEHRINGER Spezielle Studiotechnik GmbH including all BEHRINGER subsidiaries listed on the enclosed page, except BEHRINGER Japan) warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year* from the original date of purchase, in accordance with the warranty regulations described below. If the product shows any defects within the specified warranty period that are not excluded from this warranty as described under § 3 and 4, BEHRINGER shall, at its discretion, either replace or repair the product using suitable new or reconditioned parts. In the case that other parts are used which constitute an improvement, BEHRINGER may, at its discretion, charge the customer for the additional cost of these parts.

2. If the warranty claim proves to be justified, the product will be returned to the user freight prepaid.

3. Warranty claims other than those indicated above are expressly excluded.

§ 3 RETURN AUTHORIZATION NUMBER

1. To obtain warranty service, the buyer (or his authorized dealer) must call BEHRINGER (see enclosed list) during normal business hours **BEFORE** returning the product. All inquiries must be accompanied by a description of the problem. BEHRINGER will then issue a return authorization number.

2. Subsequently, the product must be returned in its original shipping carton, together with the return authorization number to the address indicated by BEHRINGER.

3. Shipments without freight prepaid will not be accepted.

§ 4 WARRANTY REGULATIONS

1. Warranty services will be furnished only if the product is accompanied by a copy of the original retail dealer's invoice. Any product deemed eligible for repair or replacement by BEHRINGER under the terms of this warranty will be repaired or replaced within 30 days of receipt of the product at BEHRINGER.

2. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship. The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, BEHRINGER shall not be held responsible for any cost resulting from such a modification/adaptation.

3. Free inspections and maintenance/repair work are expressly excluded from this warranty, in particular, if caused by improper handling of the product by the user. This also applies to defects caused by normal wear and tear, in particular, of faders, potentiometers, keys/buttons and similar parts.

4. Damages/defects caused by the following conditions are not covered by this warranty:

▲ improper handling, neglect or failure to operate the unit in compliance with the instructions given in BEHRINGER user or service manuals.

▲ connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.

▲ damages/defects caused by force majeure or any other condition that is beyond the control of BEHRINGER.

5. Any repair or opening of the unit carried out by unauthorized personnel (user included) will void the warranty.

6. If an inspection of the product by BEHRINGER shows that the defect in question is not covered by the warranty, the inspection costs are payable by the customer.

7. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. BEHRINGER will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 6 weeks after notification, BEHRINGER will return the unit C.O.D. with a separate invoice for freight and packing. Such costs will also be invoiced separately when the buyer has sent in a written repair order.

§ 5 WARRANTY TRANSFERABILITY

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of BEHRINGER.

§ 6 CLAIM FOR DAMAGES

Failure of BEHRINGER to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of BEHRINGER exceed the invoiced value of the product.

§ 7 OTHER WARRANTY RIGHTS AND NATIONAL LAW

1. This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract.

2. The warranty regulations mentioned herein are applicable unless they constitute an infringement of national warranty law.

* Customers in the European Union please contact BEHRINGER Germany Support for further details.

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