

TRUTH B2030P/B2031P

User's Manual

Version 1.0 August 2003

ENGLISH



www.behringer.com



TRUTH B2030P/B2031P

IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this device near water.
- 6) Clean only with a dry cloth.
- 7) Be sure to mount your speakers on a solid, stable and level base or stand. Vibrating floors do not provide reliable support for speaker enclosures or stacks.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Only use attachments/accessories specified by the manufacturer.
- 10) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the device. When a cart is used, use caution when moving the cart/device combination to avoid injury from stumbling over it.



11) Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, liquid has been spilled or objects have fallen into the device, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.

12) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

WARNING

THIS EQUIPMENT IS CAPABLE
OF DELIVERING SOUND
PRESSURE LEVELS IN EXCESS
OF 90 dB, WHICH
MAY CAUSE PERMANENT
HEARING DAMAGE.

TRUTH

High-Resolution, Ultra-Linear Reference Studio Monitor

- ▲ High-resolution, passive 2-way 100-Watt (B2030P) / 150-Watt (B2031P) nearfield monitor
- ▲ Ultra-linear frequency response from 75 Hz to 21 kHz (B2030P) / 55 Hz to 21 kHz (B2031P)
- ▲ Extremely high-resolution, ferrofluid-cooled tweeter
- ▲ Long-throw 6 3/4" woofer (B2031P: 8 3/4") with special polypropylene diaphragm and deformation-resistant aluminum die-cast chassis
- ▲ Controlled dispersion characteristics and extremely large "sweet spot" through BEHRINGER's wave guide technology
- ▲ Phase-optimized, low-distortion frequency crossover for accurate reproduction
- ▲ Magnetically shielded for placement near computer monitors
- ▲ Delivered as "matched pairs"
- ▲ Low-vibration, environment-friendly E1 MDF cabinet
- ▲ Designed in Germany. Manufactured under ISO9000 certified management system

TRUTH B2030P/B2031P

FOREWORD



Dear Customer,

welcome to the team of BEHRINGER users, and thank you very much for expressing your confidence in us by purchasing this studio monitor.

Writing this foreword for you gives me great pleasure, because it represents the culmination of many months of hard work delivered by our engineering team to achieve a very ambitious goal: to present two outstanding near-field monitors, whose neutral sound makes

them ideal for studio use. The task of designing our new B2030P and B2031P certainly meant a great deal of responsibility, which we assumed by focusing on you, the discerning user and musician. Meeting your expectations also meant a lot of work and night shifts. But it was fun, too. Developing a product usually brings a lot of people together, and what a great feeling it is when all who participated in such a project can be proud of what they've achieved.

It is our philosophy to share our enjoyment with you, because you are the most important member of the BEHRINGER team. With your highly competent suggestions for new products you've made a significant contribution to shaping our company and making it successful. In return, we guarantee you uncompromising quality as well as excellent technical and audio properties at an extremely reasonable price. All of this will enable you to give free rein to your creativity without being hampered by budget constraints.

We are often asked how we manage to produce such high-quality devices at such unbelievably low prices. The answer is quite simple: it's you, our customers! Many satisfied customers mean large sales volumes enabling us to get better purchasing terms for components, etc. Isn't it only fair to pass this benefit on to you? Because we know that your success is our success too!

I would like to thank all of you who have made the TRUTHs possible. You have all made your own personal contributions, from the developers to the many other employees at this company, and to you, the BEHRINGER user.

My friends, it's been worth the effort!

Thank you very much,

Uli Behringer

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1. INTRODUCTION


Congratulations! With our new BEHRINGER TRUTH you have purchased one of the best high-resolution passive studio monitors available. It is a tool that reproduces your program material with highest fidelity and balance, positioning sound sources accurately on the stereo basis.

The TRUTH speakers stand out thanks to their toughness and extremely neutral and authentic sound rendition. In the bass range, they operate with polypropylene membranes and smooth suspension. Their scope is broadened downward by using a special bass reflex system. In the upper frequency range, a specially developed ferrofluid-cooled aluminum tweeter provides for subtle signal reproduction. The TRUTH is magnetically shielded, so you can use it near computer monitors or TV sets. The audio signal is separated using a low-distortion crossover that creates a phase-optimized frequency separation.

We recommend that you experiment with your TRUTH away from the pressures of a recording session, in order to get a feel for it. It will be a good idea to listen to your favorite CD's over the TRUTH, so that you can get an impression of the neutral sound this speaker produces—which might be somewhat unusual at first!

 The following user's manual is intended to familiarize you with the unit's control elements, so that you can master all the functions. After having thoroughly read the user's manual, store it at a safe place for future reference.

ATTENTION!

 The TRUTH is capable of producing extreme volumes. Please bear in mind, that high sound pressures do not only temporarily damage your sense of hearing, but can also cause permanent damage. Be careful to select a suitable volume.

1.1 Before you get started

1.1.1 Shipment

The B2030P/B2031P were carefully packed at the factory to assure secure transport. Should the condition of the cardboard box suggest that damage may have taken place, please inspect the unit immediately and look for physical indications of damage.

Damaged units should NEVER be sent directly to us. Please inform the dealer from whom you acquired the unit immediately as well as the transportation company from which you took delivery of the unit. Otherwise, all claims for replacement/repair may be rendered invalid.

1.1.2 Initial operation

The TRUTHs must be placed on a flat and stable surface.

1.1.3 Warranty

Please take a few minutes and send us the completely filled out warranty card within 14 days of the date of purchase. You may also register online at www.behringer.com. The serial number needed for the registration is located on the rear of the unit. Failure to register your product may void future warranty claims.

2. CONTROL ELEMENTS

The control elements described in the following are the same on both speakers.

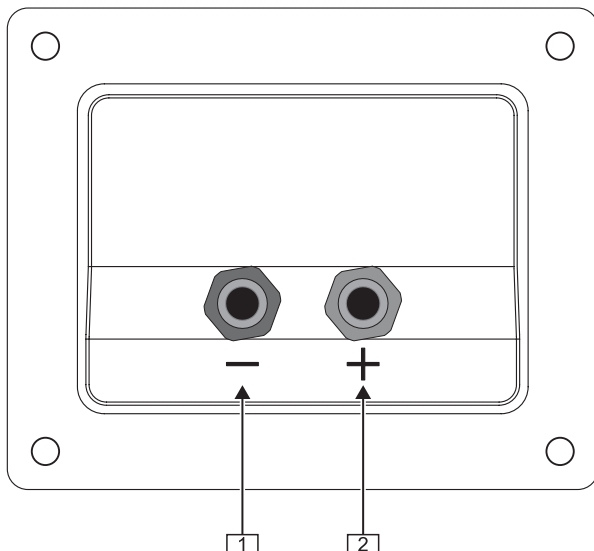
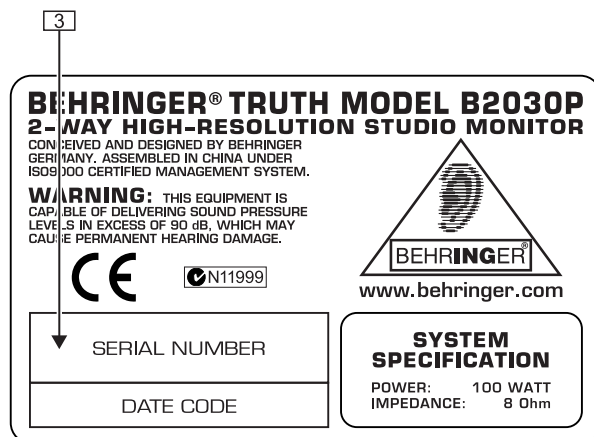


Fig. 2.1: Rear panel connectors

- 1 This is the terminal clamp for the minus cord of your speaker cable.
- 2 This is the terminal clamp for the plus cord of your speaker cable.

The connection terminal of your TRUTH is recessed. This way, you can place it in the vicinity of walls.

Always power down your amp before connecting it to the TRUTH.

- 3 **SERIAL NUMBER.** Please take a few minutes and send to us a completely filled out warranty card within 14 days of the original date of purchase. Otherwise, warranty claims may be rendered invalid. Or fill out the warranty information online at www.behringer.com.

3. APPLICATION

3.1 Connection

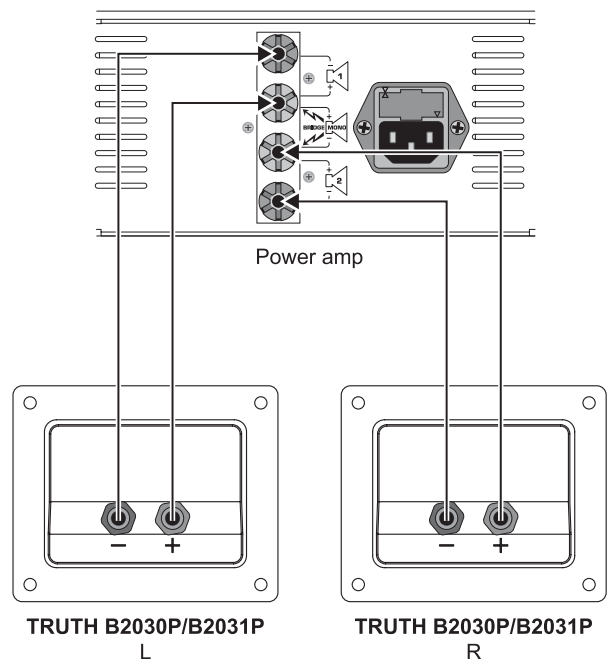


Fig. 3.1: Connecting an amplifier

Please follow these steps to connect your TRUTHs to a power amp: Loosen the plus screw (red ring with a "+") and the minus screw (black ring with a "-"). Now insert the plus cord of the speaker cable connecting the amp to your TRUTH into the plus opening. Then, connect the minus cable into the minus opening. Tighten the screws. Do the same to connect the other TRUTH.

Make sure that all connections are done properly. Speaker cables are color-coded to help avoid confusion. You'll know that the signal is inverted (i.e. you've mixed up the connections) when you notice that bass frequencies are getting lost and when the stereo characteristic of the signal is majorly worse.

Always make sure that bare wire ends never touch the open end of another speaker cable, speaker connectors or metal parts of your amp.

TRUTH B2030P/B2031P

3.1.1 The truth about speaker cables

Carefully approach the choice of what cables you use. Which cables you use can have a major influence on your sound. Cables of various lengths and diameters affect the resistance value—causing a loss in power.

On the other hand, that doesn't mean that you should be buying high-end cables that cost as much as your speakers. Simply use the following rule of thumb: Whenever possible, use cables with large diameters (gauge) and keep the cable length to a minimum. The screw clamps on your TRUTH can accept cable thickness of up to 7 mm² (9 AWG).

3.1.2 Amp

The power rating of the amp you use should be roughly twice the load capacity of your TRUTH. Consequently, the B2030P should be operated with an amp with a load capacity of 2 x 200 Watts, and the B2031P with an amp with a load capacity of 2 x 300 Watts.

Also, you should keep in mind the impedance of your TRUTH in order to guarantee optimal power delivery. The B2031P's impedance is 4 Ω, whereas the B2030P's is 8 Ω. Use an amp whose power rating roughly corresponds to the values recommended in the table. The impedance should correspond to the values listed in the table:

TRUTH	Amp power rating
B2030P	200 W into 8 Ohm
B2031P	300 W into 4 Ohm

Tab. 3.1: Recommended amp power ratings

Of course, you can use amps with higher power ratings. However, make sure not to exceed the load capacity of your TRUTH. Damage to speaker components caused by exceeding their load capacity is not covered by the warranty.

3.1.3 Protecting your TRUTH

To ensure that your B2030P/B2031P last for years to come, you should definitely keep the following in mind:

- ▲ Always turn the volume down on your amp before switching it on or off.
- ▲ When powering your equipment up/down, the amp should always be the last one to be powered up and the first one to be powered down. This way, you avoid loud crackling noise that occurs when you turn studio equipment on or off.
- ▲ Always make sure your audio signal level is optimally set. Avoid overdriving your amp.
- ▲ Do not push your studio monitors beyond their physical limitations. Even though your TRUTH has sufficient power overhead, you can still damage it if you drive it too much or crank the volume all the way up for longer periods of time.

3.2 Speaker placement suggestions

Since the sound of a speaker depends to a great extent from its surroundings, placing your TRUTH correctly is very important. Please try to follow these suggestions through. Your efforts will be rewarded with better sound and higher resolution.

Both speakers are built identically. There is no need to concern yourself with which speaker should be placed left and which speaker should be placed right. Place the TRUTHs on a flat and stable surface, if possible use a dedicated speaker stand. In this way, the speaker is acoustically decoupled and won't induce vibrations in nearby objects, which would affect the bass response. If you cannot use a stand, put the TRUTHs on spikes or damping foam material. Another aspect is the distance between speaker and wall: keep the speaker away from the wall, as this would emphasize the bass response, particularly in corners, where two walls form an angle.

The BEHRINGER TRUTH B2030P/B2031P is a so-called near-field monitor, which means that the impact of the room acoustics on the sound will be reduced considerably owing to the short distance between speaker and listener.

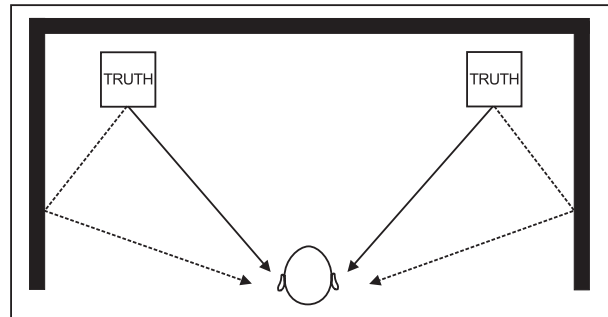


Fig. 3.2: Incorrect speaker setup

This illustration shows how you shouldn't do it: you can clearly see that a portion of the sound bounces back from the walls before it reaches the listener's ears. Thus, direct and reflected sound waves overlap which results in a coloration of the sound.

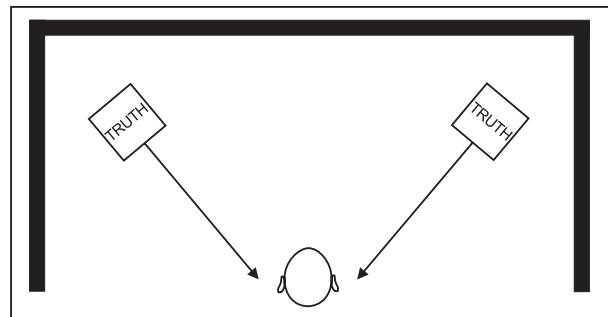


Fig. 3.3: Correct speaker setup

This effect can be reduced by turning the speakers towards the listener. To make reflections from ceiling or floor less likely, the tweeters should be on the same height as your ears. Please note that the TRUTH should be operated vertically. Where this is impossible, place it horizontally as shown in the illustration (i.e. woofers closer to each other), to allow for an improved stereo image.



Fig. 3.4: TRUTH setup horizontally

Not only the physical location of speakers but also the acoustic characteristics of the room have a substantial effect on the way your TRUTH sounds. Make sure that the room neither sounds too hall-like nor too dull—basically, neither like a bathroom nor totally without an echo. You can alter the room acoustics easily by installing or removing carpets, curtains or furniture. Fabric covering on the wall opposite the speakers might be a good idea if the room is too reflective. The next chapter describes how to adapt the TRUTH to the room acoustics, once it has been set up properly.

3.3 Adapting the TRUTH to the room acoustics

To acoustically adapt your TRUTH to your control room, in cases when the speakers are located in unusual places or when you have specific sound requirements, you may have to use an external equalizer. It should be connected in the signal path between your mixing console and your amp.

The BEHRINGER ULTRACURVE PRO DEQ2496 has proven its usefulness in practice, as it is not only a simple equalizer but also features a real-time analyzer. You can use our measuring microphone ECM8000 to automatically adapt the TRUTH to your room or modify its frequency response.

As a general rule, you should set up and adjust the TRUTH with great care. Above all, you should take your time: unlike hi-fi speakers, the TRUTH is tuned to produce a neutral sound, which can be confusing when you are working for the first time with such a high-quality speaker. Don't try to adjust the TRUTH with an equalizer to produce a "bombastic" sound that impresses you or other listeners. To get a feeling for the TRUTH's sound, you should listen to as many records as possible that were produced in other studios. We also recommend that you listen to your own recordings over as many other systems as possible, for example, your car system. If you find that your mixes are somewhat "dull" in their overall sound, the reason might be too much treble from your TRUTH. On the other hand, if you set the bass level too high, you will find that your mixes lack bass power. Tuning a speaker can take several days' time, so once again: take your time!

4. SPECIFICATIONS

CONNECTORS

Type Binding posts

SYSTEM SPECIFICATIONS

B2030P

Power rating 100 watts
Impedance 8 Ω
Frequency response 75 Hz to 21 kHz
Sound pressure level 89 dB (1 W/1 m)

B2031P

Power rating 150 watts
Impedance 4 Ω
Frequency response 55 Hz to 21 kHz
Sound pressure level 89 dB (1 W/1 m)

COMPONENTS

B2030P

Tweeter ¾" dome, ferrofluid-cooled
Woofer 6 ¾" polypropylene diaphragm

B2031P

Tweeter 1" dome, ferrofluid-cooled
Woofer 8 ¾", polypropylene diaphragm

CROSSOVER

B2030P

Crossover frequency 2.3 kHz

B2031P

Crossover frequency 2 kHz

DIMENSIONS/WEIGHT

B2030P

Dimensions (H x W x D) 12 1/2" (317 mm) x 8 2/5" (214 mm)
x 8 3/10" (211 mm)
Weight 15 1/3 lbs. (7.0 kg)

B2031P

Dimensions (H x W x D) 15 4/5" (401 mm) x 10 1/10" (257 mm)
x 10 1/2" (267 mm)
Weight 25 1/3 lbs. (11.5 kg)

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 illustrated.

5. 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 Studioteknik 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 Studioteknik 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 under the terms of this warranty will be repaired or replaced.

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, crossfaders, potentiometers, keys/buttons, tubes 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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BEHRINGER Spezielle Studioteknik GmbH, Hanns-Martin-Schleyer-Str. 36-38, 47877 Willich-Münchheide II, Germany
Tel. +49 2154 9206 0, Fax +49 2154 9206 4903

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