

User Manual



ULTRATONE K3000FX/K1800FX/K900FX/K450FX

Ultra-Flexible 300/180/90/45-Watt 4/3-Channel PA System/ Keyboard Amplifier with FX and FBQ Feedback Detection



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CAUTION BIC SHOCK DO NOT OPEN! ATTENTION AS OLIVRIR



Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock.

Use only high-guality professional speaker cables with 1/4" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.



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. Please read the manual.



Caution

To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.



Caution

To reduce the risk of fire or electric shock. do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.



Caution

These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

- Read these instructions. 1.
- Keep these instructions. 2.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this apparatus near water.
- Clean only with dry cloth. 6.

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

Do not install near any heat sources such as 8. radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. 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 the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

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

11. Use only attachments/accessories specified by the manufacturer.



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

injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to gualified 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.

15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



LEGAL DISCLAIMER

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LIMITED WARRANTY

§1 Warranty

1 This limited warranty is valid only if you purchased the product from a MUSIC Group Authorized Reseller in the country of purchase. A list of authorized resellers can be found on BEHRINGER's website behringer.com under "Where to Buy", or you can contact the MUSIC Group office closest to you.

2 MUSIC Group* warrants the mechanical and electronic components of this product to be free of defects in material and workmanship if used under normal operating conditions for a period of one (1) year from the original date of purchase (see the Limited Warranty terms in § 4 below), unless a longer minimum warranty period is mandated by applicable local laws. If the product shows any defects within the specified warranty period and that defect is not excluded under § 4, MUSIC Group shall, at its discretion, either replace or repair the product using suitable new or reconditioned product or parts. In case MUSIC Group decides to replace the entire product, this limited warranty shall apply to the replacement product for the remaining initial warranty period, i.e., one (1) year (or otherwise applicable minimum warranty period) from the date of purchase of the original product.

3 Upon validation of the warranty claim, the repaired or replacement product will be returned to the user freight prepaid by MUSIC Group.

④ Warranty claims other than those indicated above are expressly excluded.

PLEASE RETAIN YOUR SALES RECEIPT. IT IS YOUR PROOF OF PURCHASE COVERING YOUR LIMITED WARRANTY. THIS LIMITED WARRANTY IS VOID WITHOUT SUCH PROOF OF PURCHASE.

§ 2 Online registration

Please do remember to register your new BEHRINGER equipment right after your purchase at behringer.com under "Support" and kindly read the terms and conditions of our limited warranty carefully. Registering your purchase and equipment with us helps us process your repair claims guicker and more efficiently. Thank you for your cooperation!

§ 3 Return materials authorization

1 To obtain warranty service, please contact the retailer from whom the equipment was purchased. Should your MUSIC Group Authorized Reseller not be located in your vicinity, you may contact the MUSIC Group Authorized Fulfiller for your country listed under

"Support" at behringer.com. If your country is not listed, please check if your problem can be dealt with by our "Online Support" which may also be found under "Support" at behringer.com. Alternatively, please submit an online warranty claim at behringer.com BEFORE returning the product. All inquiries must be accompanied by a description of the problem and the serial number of the product. After verifying the product's warranty eligibility with the original sales receipt, MUSIC Group will then issue a Return Materials Authorization ("RMA") number.

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

Shipments without freight prepaid will not be accepted.

§ 4 Warranty Exclusions

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This limited warranty does not cover consumable parts including, but not limited to, fuses and batteries. Where applicable, MUSIC Group warrants the valves or meters contained in the product to be free from defects in material and workmanship for a period of ninety (90) days from date of purchase.

⁽²⁾ This limited warranty does not cover the product if it has been electronically or mechanically modified in any way. 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. This limited warranty does not cover any such modification/adaptation, regardless of whether it was carried out properly or not. Under the terms of this limited warranty, MUSIC Group shall not be held responsible for any cost resulting from such a modification/adaptation.

③ This limited warranty covers only the product hardware. It does not cover technical assistance for hardware or software usage and it does not cover any software products whether or not contained in the product. Any such software is provided "AS IS" unless expressly provided for in any enclosed software limited warranty.

(4) This limited warranty is invalid if the factory-applied serial number has been altered or removed from the product.

Free inspections and maintenance/repair work are expressly excluded from this limited 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, guitar strings, illuminants and similar parts.

6 Damage/defects caused by the following conditions are not covered by this limited 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;
- damage/defects caused by acts of God/Nature (accident, fire, flood, etc) or any other condition that is beyond the control of MUSIC Group.

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

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

Products which do not meet the terms of this limited warranty will be repaired exclusively at the buyer's expense. MUSIC Group or its authorized service center will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 6 weeks after notification, MUSIC Group 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.

1 MUSIC Group Authorized Resellers do not sell new products directly in online auctions. Purchases made through an online auction are on a "buyer beware" basis. Online auction confirmations or sales receipts are not accepted for warranty verification and MUSIC Group will not repair or replace any product purchased through an online auction.

§ 5 Warranty transferability

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

§ 6 Claim for damage

Subject only to the operation of mandatory applicable local laws, MUSIC Group shall have no liability to the buyer under this warranty for any consequential or indirect loss or damage of any kind. In no event shall the liability of MUSIC Group under this limited warranty exceed the invoiced value of the product.

§7 Limitation of liability

This limited warranty is the complete and exclusive warranty between you and MUSIC Group. It supersedes all other written or oral communications related to this product. MUSIC Group provides no other warranties for this product.

§ 8 Other warranty rights and national law

1 This limited warranty does not exclude or limit the buyer's statutory rights as a consumer in any way.

The limited warranty regulations mentioned herein are applicable unless they constitute an infringement of applicable mandatory local laws. 3 This warranty does not detract from the seller's obligations in regard to any lack of conformity of the product and any hidden defect.

§9 Amendment

Warranty service conditions are subject to change without notice. For the latest warranty terms and conditions and additional information regarding MUSIC Group's limited warranty, please see complete details online at behringer.com.

* MUSIC Group Macao Commercial Offshore Limited of Rue de Pequim No. 202-A, Macau Finance Centre 9/J, Macau, including all MUSIC Group companies

1. Introduction

Congratulations! The ULTRATONE is a modern, powerful keyboard amplifier with the qualities of a complete PA system. It combines a whole lot of features, huge power reserves and extreme flexibility in one device, and thanks to its comprehensive connection and extension options—for example Stereo Link facility for true stereo operation and additional Line Out for direct connection to a mixing console—you will always be able to achieve the best possible performance in every situation.

1.1 Before you get started

1.1.1 Shipment

Your ULTRATONE was carefully packed at the factory, and the packaging was designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage that may have occurred during transit.

- If the unit is damaged, please do NOT return it to BEHRINGER. Instead, notify your dealer and the shipping company immediately. Otherwise, claims for damage or replacement may not be honored.
- Always use the original packing carton to prevent damage during storage or transport.
- Make sure that no children are left unsupervised with the ULTRATONE or its packaging.
- Please ensure proper disposal of all packing materials.

1.1.2 Initial operation

Be sure that there is enough space around the unit for cooling and please do not place the ULTRATONE on high temperature devices such as radiators etc. to avoid overheating.

Blown fuses must be replaced by fuses of the same type and rating! Please refer to the "Specifications" for details.

The mains connection of the ULTRATONE is made by using the enclosed mains cable and a standard IEC receptacle. It meets all of the international safety certification requirements.

Please make sure that all units have a proper ground connection. For your own safety, never remove or disable the ground conductor from the unit or of the AC power cord.

1.1.3 Online registration

Please register your new BEHRINGER equipment right after your purchase by visiting http://behringer.com and read the terms and conditions of our warranty carefully.

Should your BEHRINGER product malfunction, it is our intention to have it repaired as quickly as possible. To arrange for warranty service, please contact the BEHRINGER retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may directly contact one of our subsidiaries. Corresponding contact information is included in the original equipment packaging (Global Contact Information/European Contact Information). Should your country not be listed, please contact the distributor nearest you. A list of distributors can be found in the support area of our website (http://behringer.com).

Registering your purchase and equipment with us helps us process your repair claims more quickly and efficiently.

Thank you for your cooperation!

ATTENTION!

High volume levels can damage your hearing or your headphones. Please turn down the VOLUME control to zero (all the way to the left) before you power up the amp. Always make sure you use appropriate volume levels.

2. Control Elements

- The LEVEL controls adjust the signal level of channels 1 4 (K900FX and K450FX: channels 1 - 3).
- The four FX controls adjust the channel 1 4 signal level at the input of the integrated effects processor (K900FX and K450FX: three controls for channels 1 - 3).
- The channel 4 signal (K3000FX and K1800FX only) is normally routed just to the PHONES output without effects. This way you can practice without being heard, or you can connect a metronome that you need on headphones but not on speakers. By pressing the **TO MAIN** button the signal will be additionally routed to the speakers without effects.
- By pressing the **TO LINE OUT** button the channel 4 signal will be additionally routed to the LINE OUT output without effects (K3000FX and K1800FX only).
- If you press both the TO MAIN and TO LINE button, channel 4 will be equal to channels 1 - 3. The signal will be routed to the speakers and the LINE OUT output including effects.
- **S** The ULTRATONE is equipped with a 7-band graphic equalizer (K900FX and K450FX: 5-band graphic equalizer). Use the EQ to adapt the sound to the room acoustics.
- Press the FBQ switch to activate the FBQ Feedback Detection System. The frequencies causing feedback are shown by the brightly lit fader LEDs. Simply lower the level of the respective frequency range until feedback disappears and the LED goes out.
- The FX display shows the currently selected preset. The SIG LED lights up when the effects processor receives an input signal. When the CLIP LED lights up please reduce the effects input signal by using the respective FX control(s) 2.
- Iurn the FX control to select an effects preset (preset number starts flashing). Push the control briefly to confirm your selection.
- Ite LEVEL control in the master section is used to adjust the main output volume.
- 10 Turn the **FX RET** control to add the effect signal to the main mix.
- Pressing the SHAPE button will add the Shape effect to the main signal. The Shape function on your ULTRATONE provides a revolutionary type of filter that you can use to modify your keyboard sound (K3000FX and K1800FX only).
- 12 Use the **PHONES** jack to plug in your headphones.
- The **PHONES LEVEL** control adjusts the headphones output level (K3000FX and K1800FX only).
- Use the **POWER** switch to switch the ULTRATONE on or off. You should always make sure that the POWER switch is in the "Off" position when initially connecting the unit to the mains.

To disconnect the unit from the mains, pull out the main cord plug. When installing the product, ensure that the plug is easily accessible.

Please note: Merely switching the unit off does not mean that it is fully disconnected from the mains. When not using the unit for prolonged periods of time, please unplug the unit's power cord from the power outlet.

- **MAINS CONNECTION**. Use the power cord supplied with the unit to connect it to the mains.
- **FUSE HOLDER/VOLTAGE SELECTOR**. Before connecting the unit to the mains, make sure that the voltage setting matches your local voltage. A blown fuse should only be replaced by a fuse of the same type and rating. On some units, the fuse holder can be switched to one of two positions, i.e. 230 V and 120 V. When operating the unit outside Europe at 120 V, a higher fuse rating is required.
- The GROUND LIFT switch disconnects (switch pressed) the ground connection at the LINE OUT output to effectively eliminate hum noise resulting from ground loops (K3000FX and K1800FX only).
- Use the balanced LINE OUT XLR connectors to feed the audio signal from your ULTRATONE to a mixing console (K3000FX and K1800FX only). The LINE OUT signal is post-EQ.
- These are the LINE OUT outputs on 1/4" TS connectors (K900FX and K450FX: one 1/4" TS connector).
- So the XLR and 1/4" TS LINE OUT connectors can be used simultaneously.
- For stereo operation the ULTRATONE features a STEREO LINK facility. You can connect the OUT of the ULTRATONE to the LINK IN of another keyboard amp that serves as slave to achieve true stereo sound. When using the ULTRATONE as slave, connect the LINK OUT of the master amp to the IN (K3000FX and K1800FX only).

- 21 The **SUB OUT** connector provides the line-level mono subwoofer signal for connection to the input of a power amp or active subwoofer.
- Connect your footswitch to the FOOT SW jack, so as to activate/deactivate the effects processor.
- Use the CD IN (K900FX and K450FX: AUX IN) connectors to connect the output of your CD player, tape deck, CD or MD walkman. This way you can play along to music or keyboard tutorial CDs.
- These are the LINE inputs for channels 1 4 on ¼" TS connectors. For mono input signals please use the L (MONO) connector.
- Channel 1 is equipped with an additional XLR MIC input. Due to internal +15 V phantom power you can even use condenser microphones. Both XLR and ¼" TS connectors can be used simultaneously. In this case the LEVEL control of channel 1 adjusts both the level of the LINE and MIC signal.



Fig. 2.2: Rear panel control elements (K3000FX and K1800FX)

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Fig. 2.4: Rear panel control elements (K900FX and K450FX)

3. Wiring Tips



Fig. 3.1: Example of a setup using the ULTRATONE



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Fig. 3.2: Live setup

Fig. 3.1 shows how to connect your keyboard, a drum machine and a microphone to the ULTRATONE. Additionally a CD player is connected to the AUX IN input to feed in a playback. With the footswitch you can activate/deactivate the internal effects processor.

Fig. 3.2 shows a recommended setup for amplifying the sound of your ULTRATONE using a sound reinforcement system of any size. This way, you can also use your amp for playing live or for rehearsals with your band.

4. Audio Connections

The ULTRATONE features ¼" connectors on inputs and outputs plus additional balanced XLR connectors for channel 1 input and Line Out outputs (K3000FX and K1800FX). More detailed information can be found in chapter 5, "Specifications."



Fig. 4.1: ¼" TS connector



Fig. 4.2: ¼" TRS connector



Fig. 4.3: XLR connectors



Fig. 4.4: RCA cable (for CD IN/AUX IN connection)

5. Specifications

Audio Ir	nputs
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Line In 1 - 4	1⁄4" TS connector
Input impedance	approx. 30 k Ω balanced
Stereo Link In	1/4" TS connector
Input impedance	approx. 20 k Ω unbalanced
CD In/Aux In	RCA connector
Input impedance	approx. 20 k Ω unbalanced
Mic In 1	XLR connector
Input impedance	approx. 2 k Ω balanced

Audio Outputs

1/4" TRS connector
1/4" TS and XLR connector
$^{1\!\!/}$ TS connector: approx.150 Ω unbalanced XLR connector: approx. 300 Ω balanced
1/4" TS connector
approx. 150 Ω unbalanced
1/4" TS connector
approx. 150 Ω unbalanced

Equalizer

Graphic EQ with FBQ Feedback Detection
63 Hz/160 Hz/400 Hz/1 kHz/2.5 kHz/ 6.3 kHz/12 kHz
63 Hz/250 Hz/1 kHz/3.5 kHz/12 kHz
2/3-oct.
+12 to -12 dB

Digital Effects Processor

Converters	24-bit sigma-delta, 64/128-times oversampling
Sampling rate	40 kHz

System Specifications

Power amp output		
K3000FX	300 Watts	
K1800FX	180 Watts	
K900FX	90 Watts	
K450FX	45 Watts	

Loudspeaker

Туре

K3000FX	15" BUGERA woofer and custom-made 1" driver
K1800FX	12" BUGERA woofer and custom-made 1" driver
K900FX	12" BUGERA woofer and custom-made 1" driver
K450FX	10'' BUGERA speaker
Input impedance	4 Ω

Mains voltage USA/Canada 120 V~, 60 Hz U.K./Australia 230 V~, 50 Hz Europe 230 V~, 50 Hz China/Korea 220 V~, 50 Hz Japan 100 V~, 50 - 60 Hz General export model 120/230 V~, 50 - 60 Hz Power consumption K3000FX approx. 350 Watts K1800FX approx. 290 Watts K900FX approx. 150 Watts K450FX approx. 75 Watts Fuse K3000FX 100 - 120 V~: 6.3 A H 250 V 220 - 240 V~: 3.15 A H 250 V K1800FX 100 - 120 V~: 6.3 A H 250 V 220 - 240 V~: 3.15 A H 250 V K900FX 100 - 120 V~: 3.5 A H 250 V 220 - 240 V~: 1.6 A H 250 V K450FX 100 - 120 V~: 2.5 A H 250 V 220 - 240 V~: 1.25 A H 250 V Mains connection Standard IEC receptacle

Dimensions/Weight

Power Supply

imensions	
K3000FX	approx. 20
K1800FX	approx. 16
K900FX	approx. 16
K450FX	approx. 16 ½ x 17 ¾ x 11 ¾" approx. 419 x 441 x 299 mm
Veight	
K3000FX	approx. 65.04 lbs / 29.5 kg
K1800FX	approx. 44.32 lbs / 20.1 kg
K900FX	approx. 41.45 lbs / 18.8 kg
K450FX	approx. 32.19 lbs / 14.6 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 shown.

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

FC BEHRINGER ULTRATONE K3000FX/K1800FX/K900FX/K450FX

Responsible Party Name:	MUSIC Group Services US Inc.
Address:	18912 North Creek Parkway, Suite 200 Bothell, WA 98011, USA

Phone/Fax No.:

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Phone: +1 425 672 0816 Fax: +1 425 673 7647

ULTRATONE K3000FX/K1800FX/K900FX/K450FX

complies with the FCC rules as mentioned in the following paragraph:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation.

Important information:

Changes or modifications to the equipment not expressly approved by MUSIC Group can void the user's authority to use the equipment.



We Hear You

