USB-GUITAR

iAXE393

User's manual

en

Version 1.1 September 2006

www.behringer.com

BEHRINGER

JUST LISTEN.

iAXE393 USB-GUITAR

IMPORTANT SAFETY INSTRUCTIONS

CAUTION
RISK OF ELECTRIC SHOCK!
DO NOT OPEN!
ATTENTION
RISQUE DE CHOC ELECTRIQUE!
NE PAS OUVRIR!

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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.

WARNING: 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 and no objects filled with liquids, such as vases, shall be placed on the apparatus.

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.

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

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

8) Only use attachments/accessories specified by the manufacturer.

9) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

10) 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 unless you are qualified to do so.

USB-GUITAR

The Ultimate Electric Guitar with Built-In USB Port to Connect Straight to Your Computer. Jam with Killer Modeling Amps and Effects

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▲ Plug this amazing USB-guitar straight into your computer and turn your PC or Mac computer into a guitar amp and recording system without the need for any other hardware

▲ You get a top-notch electric guitar featuring a 22-fret maple neck, solid body, chrome machine heads, 3 single-coil pickups, 5-way switching and vintage vibrato bridge. The guitar can also be used with any traditional guitar amplifier

▲ Enjoy immediate access to "Guitar Combos BEHRINGER Edition" from Native Instruments—the leading authentic guitar amp and stomp box modeling software

▲ Package also includes Kristal 16-track music production and Audacity editing software

▲ Works directly with your PC or Mac computer—ultra-low latency ASIO drivers for PC included

▲ All these accessories are included: CD, USB cable, adjustable guitar strap and 3 picks

▲ Stereo Headphone output lets you jam with your computer and can also be used for monitoring with active monitor speakers

▲ Variable-speed file playback function for MP3, WAV, AIFF audio files—perfect for easy learning and practising

▲ Powered via USB—no additional power supply required

▲ High-quality components and exceptionally rugged construction ensure long life

▲ Conceived and designed by BEHRINGER Germany

iAXE393 USB-GUITAR

FOREWORD

Dear customer,

Welcome to the team of BEHRINGER users, and thank you very much for expressing your confidence in us by purchasing this iAXE393.

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 design an outstanding electric guitar with integrated USB interface that allows the direct connection to the computer, which convinces through its excellent sound and offers a maximum of flexibility and performance. The task of designing our new iAXE393 guitar 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 everyone that made the iAXE393 possible in the first place. 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

Thank you for expressing your confidence in us by purchasing the BEHRINGER iAXE393 USB-GUITAR.

Your computer will become the ultimate working platform on which you can use the classic effects, in the studio as well as on stage. BEHRINGER presents the groundbreaking iAXE393 USB-Guitar which gives you the possibility to record the brilliant song, which just came to your mind, immediately and directly to your computer.

With a notebook and the BEHRINGER iAXE393 USB-Guitar it is now possible to work on the go, be it train or hotel.

The iAXE393 guitar's scope of delivery includes a first-class modeling software with virtual amps and effects pedals. Accompany songs in MP3, WAV, AIFF format which you can play from your computer or Mac.

1.1 Before you get started

1.1.1 Shipment

Your iAXE393 USB-Guitar was carefully packed at the assembly plant 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 equipment 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. Otherwise, all claims for replacement/ repair may be rendered invalid.**

☞ **Please always use the original packaging to avoid damage due to storage or shipping.**

☞ **Never let unsupervised children play with the iAXE393 USB-Guitar or with its packaging.**

☞ **Please dispose of all packaging materials in an environmentally friendly fashion.**

1.1.2 Care

Do not lean your guitar against walls; it could get knocked over or bumped into.

Never leave your guitar lying on the floor or on the edge of your bed where it may get stepped on or knocked off er even sat on.

Never leave your instrument in the trunk of a car when the weather is very warm or extremely cold. Extereme temperatures can be harmful to your gear.

1.1.3 Online registration

Please, do remember to register your new BEHRINGER equipment right after your purchase by visiting www.behringer.com (alternatively www.behringer.de) and kindly read the terms and conditions of our warranty carefully.

Should your BEHRINGER product malfunction, our goal is to have it repaired as quickly as possible. To arrange for warranty service, please contact the 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 (www.behringer.com).

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

Thank you for your cooperation!

iAXE393 USB-GUITAR

2 CONTROLS AND CONNECTIONS

The iAXE393 can either be connected directly via jack to an amplifier or by connecting the provided USB cable to your PC/Mac computer. At the same time, the USB connection acts as power supply for the iAXE393 guitar.
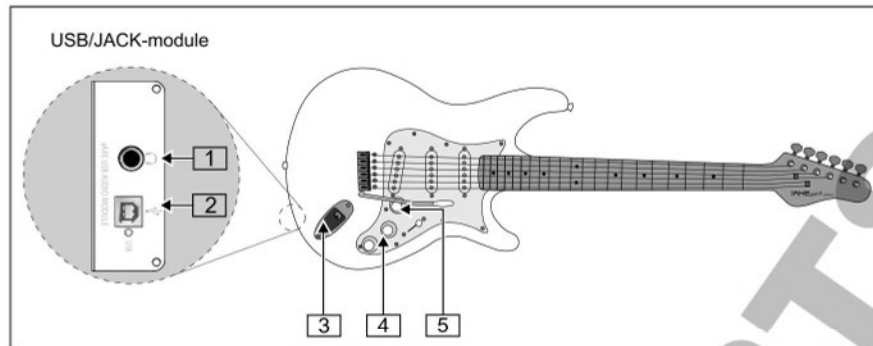

Fig. 2.1: Control elements and connections

[1] You can use a commercially available ¼" TRS for the ∩-connection.

[2] You can connect the guitar with the *USB* connection to your computer via USB. The blue control LED indicates that a connection to the computer has been established.

[3] The ¼" TS connection can be used to connect the iAXE393 guitar to any standard guitar amplifier. (See Fig. 4.2)

[4] With the *TONE* controllers, you can lower the high frequencies of the guitar.

☞ **These controllers affect both conventional and USB output.**

[5] The *VOLUME* controller lets you change the volume of the guitar output. The headphone volume needs to be changed by using the software on the computer.

☞ **We would like to draw your attention to the fact that extremely loud sound levels may damage your hearing as well as your headphones/loudspeakers. Turn the VOLUME control fully to the left before you switch on the unit. Be careful to select a suitable volume at all times.**

☞ **This controller affects both conventional and USB output.**

3 SOFTWARE

3.1 Included software

The iAXE393 USB-Guitar comes with a complete software bundle which allows you to start immediately. The software package consists of:

▲ Native Instruments "Guitar Combos BEHRINGER Edition"— 3 different combos (PC/Mac)
▲ Kristal Audio Engine (PC)
▲ Audacity (PC/Mac)
▲ BEHRINGER USB AUDIO-Driver (PC)

Enjoy the direct access to fantastic "GUITAR COMBOS" of Native Instruments which are to be found on the provided CD with the installation guide and user's manual.

The Native Instruments "GUITAR COMBOS" series combines outstanding sound quality with maximum ease of use and playability.

Classic Combos
GUITAR COMBOS perfectly recreate three classic combos, using the same critically acclaimed technology that has already won GUITAR RIG numerous industry awards. The lovingly emulated tube combos have an absolutely authentic, warm and dynamic sound, producing the purest of tones. The different presets only hint at the wide musical spectrum covered by these classic amps.

Professional Sound
The GUITAR COMBOS utilize the same Dynamic Tube Response technology that was developed for GUITAR RIG, giving the series the same exceptional sound quality. The GUITAR COMBOS are perfectly suited to musicians with little or no experience of professional music software. A computer, sound card*, a guitar and these combos are all that is needed to enjoy the sound of professional studio productions.

The Full Spectrum
The GUITAR COMBO I (AC Box Combo) is the popular role model that revolutionised British pop music. From soft to distorted—this combo has a uniquely inspiring sonic character. The GUITAR COMBO II (Twang Combo) is the epitome of the clean and crunchy blues sound. Over the course of several decades this warm and unmistakeable sound has made a valuable contribution to countless hits. Based on the famous tube amps that spawned the guitar legends of the late 60s and early 70s, the GUITAR COMBO III (Plexi Combo) embodies the rock sound. Its distinctive and individual tone can be as warm as it can be hard.

Features
▲ Based on award-winning GUITAR RIG amps, cabinets and effects
▲ Three unique combos, each with their own characteristic design and sound
▲ Intuitive user-interface and particularly easy to use
▲ Outstanding, professional sound quality and performance
▲ Every combo includes a tuner, noise gate and limiter
▲ Additional, individual pre and post effects for each combo
▲ Integrated Tapedeck for playback of audio files as well as a metronome
▲ Presets included as well as option to save your own additional, personal presets
▲ Full MIDI compatibility including MIDI learn functions

After installing the software, you can test 3 different amp simulations for 30 days. Subsequently, you have to choose one of the amps which then needs to be registered on the dedicated NI-BEHRINGER Internet page at:

www.native-instruments.com/comboshop.info.

Here you will find an overview with a brief description of the 3 combos that are provided. Furthermore, the steps of purchase as well as how to use your coupon are described in the top part of the page (see Fig. 3.1). For example, click "Order GUITAR COMBO I" to order Combo I, then follow the instructions found in the NI Online Shop, i.e. the shopping cart.
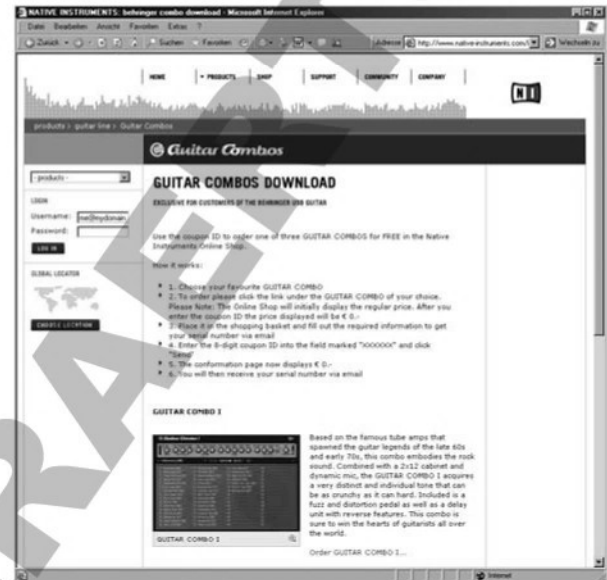

Fig. 3.1: Starting of Online-Shop

Figure 3.2 shows the second step "2. Product Details" found in the NI-Behringer Shop. After that, your purchase is not far off.

Fig. 3.2: Second step "2. Product Details" of NI-Behringer Shop

iAXE393 USB-GUITAR

3.2 System requirements

To connect the iAXE393 USB-Guitar to a computer, you need a free USB slot.

☞ **The iAXE393 USB-Guitar is compatible with both PC and Mac computers. Therefore, no installation procedure or drivers are required for the correct functioning of the iAXE393 USB-Guitar. As soon as you connect the iAXE393 USB-Guitar to a free USB slot, it will be recognized as generic USB audio device.**

☞ **If you want to make use of the included drivers and applications, please observe the system requirements of the respective manufacturers.**

IIf you want to use the guitar for real-time applications on the PC, e.g. for recording or to use with the provided "Guitar Combos" from Native Instruments, we **strongly** recommend the installation of the included USB audio driver to ensure a low latency (see Chapter 3.3).

To work with the software that comes with the guitar, your computer must meet the following minimum requirements:

	PC	MAC
Operating system	Windows XP	Mac OS X v10.3.x
Processor	Pentium 700 MHz Athlon XP 1.33 GHz	G4 733 MHz
RAM	256 MB	512 MB

3.3 Device drivers and latency

A device driver is an interface that ensures communication between the software (audio application) and the hardware (your iAXE393). In recent years, the PC platform has witnessed the establishment of several different driver models for sound cards. Some of these drivers cannot be used for simultaneous recording and playback or for working with software plug-ins, since they do not support the full performance provided by professional sound cards and cause a long time delay (this is called "latency").

With standard Windows applications, you don't need to worry about which driver is currently being used by the operating system. You only need to select the correct playback device via the Windows "Control Panel".

However, as soon as you start to produce or record computer-based music and work with special audio software such as Cubase, Live, Logic, Tracktion, or others, you should make sure that you selected an ASIO driver. This driver model supports the full range of functions offered by your hardware and gives you the best performance. With the USB Audio Driver, we have already included one of the fastest ASIO drivers currently available.

You will normally find the selection of a driver model for computer hardware in the standard default settings of the software you are using. If necessary, check the documentation for your software. Use the control panel to set up a lower latency. The smaller the value, the better. If audio dropouts occur, try increasing the latency in stages.

Things are much simpler with the Mac platform. With OS X operating system, there is only one driver model, the CoreAudio driver. Thus, there's no need to worry about selecting a driver.

3 SOFTWARE

4 APPLICATION EXAMPLES

The iAXE393 USB-Guitar is an extraordinary guitar. You can connect it directly to a computer and record music or play along to your favorite songs. Additionally, you can enjoy the exciting sounds of virtual guitar amps and stomp boxes. The iAXE393 USB-Guitar is the perfect solution if you want to start playing immediately. It is so easy—plug and rock!
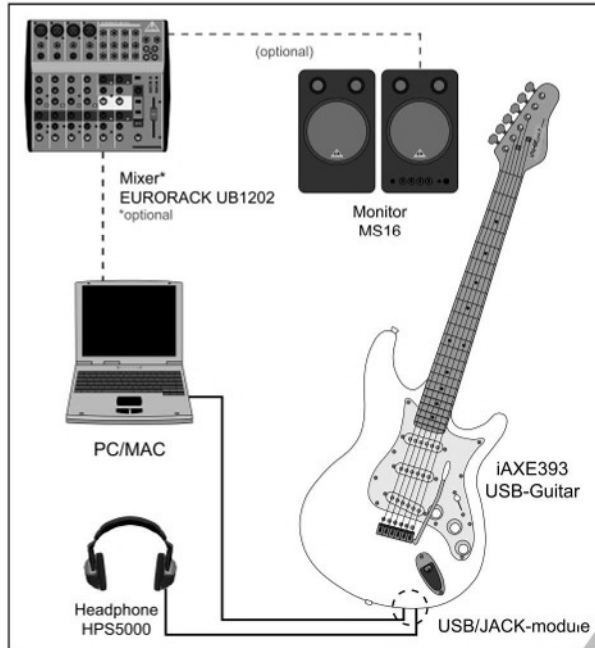
4.1 Operation of the USB connector

Fig. 4.1: Wiring of the USB guitar

Use the USB cable, which is included, to connect the iAXE393 USB-Guitar to your computer. The USB unit of the iAXE393 USB-Guitar is bus powered—no separate power supply is needed. The blue LED below the USB connector ([2]) lights up and the system will indicate the connection of a USB audio unit.

Connect your headphones to the PHONES-connector on the guitar, which is located directly above the USB-connector. If you don't want to use your headphones, you can also connect a pair of active monitors to the PHONES-connector—the BEHRINGER MONITOR SPEAKERS MS16 are a perfect choice for this application.

If you own a mixing console, you can do the following: connect a stereo input of the mixing console to the PHONES-connector and the active monitors to the control room outputs of the mixing console.

4.2 Connection to a guitar amp

Fig. 4.2: Connection to a guitar amp

Instead of using the USB function of the guitar, you can also use the guitar the same way as a conventional electric guitar. To do so, simply connect the ¼" TS connector ([3]) to a guitar amp instrument input. This gives you the opportunity to play without a computer, for example, when jamming with your band.

The conventional guitar output works independently from the USB connector, meaning you can simultaneously play via the USB port and a guitar amp. This way, you can set up a means of direct monitoring to avoid latency problems.

The advantage of this setup is that while listening to the sound coming from your guitar amp, you can record a clean guitar sound.

Using plug-ins, you can experiment with different effects and amplifiers afterwards.

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5 AUDIO CONNECTIONS

With both connection options—the common guitar output and the additional USB output—a variety of applications are at your disposal. The well-known ¼" output jack can be connected to the input of your guitar amplifier as usual. With the help of the integrated USB interface you turn your computer into an ultimate recording studio.

Whether for studio application or practicing at home, the audio connections used always remain the same:

5.1 Wiring

For connecting your iAXE393 USB-Guitar to your guitar amplifier, you need a standard instrument cable.
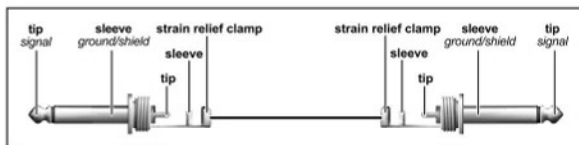
Fig. 5.1: Unbalanced instrument cable with ¼" TS connector

5.2 Headphone connection

The iAXE393 USB-Guitar provides a connection for headphones. You can connect any standard commercial headphone with a ¼" TRS jack plug. For mini TRS jack plugs, you will need a suitable adapter. You can see the required pin allocation from the following diagram.
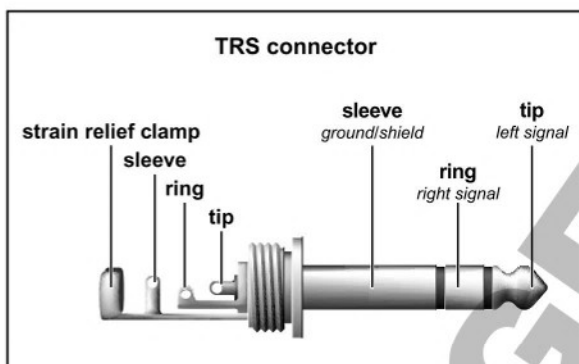
Fig. 5.2: ¼" TRS stereo connector

5.3 USB cable

The iAXE393 USB-Guitar comes with a USB output for connecting USB compatible devices like notebooks or MP3 players. Here you can connect any standard USB cable.

Fig. 5.3: USB connector cable

6 SPECIFICATIONS

GUITAR OUT
Connector   ¼" TS, unbalanced

PHONES OUT
Connector   ¼" TRS stereo jack
Output impedance   approx. 50 Ω
Max. output level   4.5 dBu, 2 x 8.5 mW @ 32 Ω

USB 1.1
Connector   type A

DIGITAL PROCESSING
Converter   16-bit converter
Sample rate   32.0 / 44.1 / 48 kHz

POWER SUPPLY
USB connection   5 V ⎓ , 100 mA max.

DIMENSIONS/WEIGHT
Dimensions
(H x W x D)   approx. 990 mm x 330 mm x 60 mm
                     33.98" x 12.99" x 2.36"
Weight   approx. (6.62 lbs) 3.0 kg

SYSTEM REQUIREMENTS SOFTWARE (PC / MAC)

Operating system	Win XP	Mac OS X v10.3.x
Processor min.	Pentium 700 MHz	G4 733 MHz
	Athlon XP 1.33 GHz	
RAM	256 MB	512MB

SOFTWARE
Applications   please see feature list on chapter 3.1
Driver (Windows)   high-performance driver
                     BEHRINGER USB AUDIO
                     for Win 98 (SE) / ME / 2000 / XP
Driver (Mac OS X)   Core Audio

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.

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7 WARRANTY

§ 1 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.

§ 2 ONLINE REGISTRATION

Please do remember to register your new BEHRINGER equipment right after your purchase by visiting www.behringer.com (alternatively www.behringer.de) and kindly read the terms and conditions of our warranty carefully.

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

Thank you for your cooperation!

§ 3 WARRANTY

1. BEHRINGER (BEHRINGER International 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 § 5, 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.

§ 4 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.

§ 5 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, guitar strings, illuminants 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.

§ 6 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.

§ 7 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.

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

iAXE393 USB-GUITAR