

GUITAR LINK

UCG102



www.behringer.com

User manual

Version 1.0 October 2006



IMPORTANT SAFETY INSTRUCTIONS

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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.

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

DETAILED SAFETY INSTRUCTIONS:

- 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.

GUITAR LINK

The Ultimate Guitar-to-USB Interface to Jam and Record with Killer Modeling Amps and Effects

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- ▲ Plug in your favorite guitar and turn your PC or Mac computer into a guitar amp and recording system without the need for any other hardware
- ▲ 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
- ▲ 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 practicing
- ▲ Powered via USB—no additional power supply required
- ▲ High-quality components and exceptionally rugged construction ensure long life
- ▲ Conceived and designed by BEHRINGER Germany

FOREWORD



Dear customer,

Welcome to the team of BEHRINGER users, and thank you very much for expressing your confidence in us by purchasing this UCG102.

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 a USB interface that allows a guitar to be connected directly to the computer, convinces through its excellent sound and offers a maximum of flexibility and performance. The task of designing our new UCG102 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.

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GUITAR LINK UCG102

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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 UCG102 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,

A handwritten signature in black ink, consisting of a stylized 'U.' followed by a cursive 'B' and a long horizontal line extending to the right.

Uli Behringer

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1 INTRODUCTION


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Thank you for expressing your confidence in us by purchasing the GUITAR LINK UCG102. Your computer will become the ultimate working platform on which you can use the classic effects, in the studio as well as on stage. With a notebook, a guitar and the UCG102, it is now possible to work on the go, be it train or hotel. The GUITAR LINK UCG102's scope of delivery includes a first-class modeling software with virtual amps and effects pedals. Accompany songs in MP3-, WAV- and AIFF-format which you can play from your PC or Mac computer. A headphone connection with a volume regulator is also available so that you can enjoy the session with your favorite volumes undisturbed, entirely after the motto "Plug'n Rock"..



1.1 Before you get started

1.1.1 Shipment

Your GUITAR LINK UCG102 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 device or with its packaging.**
-  **Please dispose of all packaging materials in an environmentally friendly fashion.**

1.1.2 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.

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!

2 CONTROLS AND CONNECTIONS

You can connect the UCG102 directly to an amp by means of the jack connector and to your PC or Mac computer by using the USB connector. The USB connection supplies the power for the UCG102.

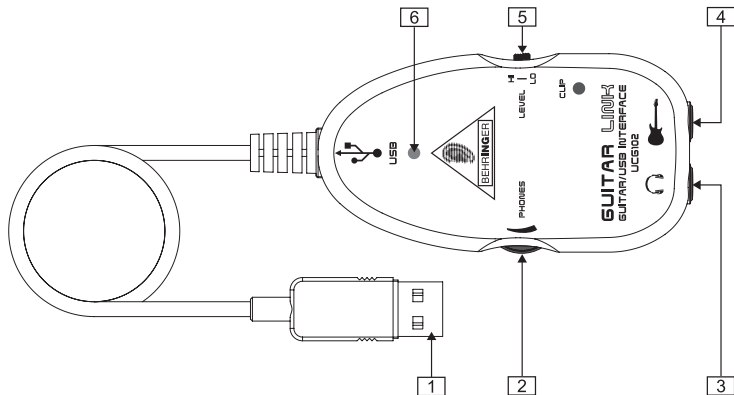





Fig. 2.1: Control elements and connections

- 1 You can connect the guitar to your computer via USB connection. The blue control LED () indicates that a connection to the computer has been established.
 - 2 The *VOLUME* control adjusts the volume level of the headphones output. Turn the control fully to the left before you connect the headphones. This helps you avoid the damage that is caused by high volume settings.
 - 3 You can use a commercially available ¼" jack for the -connection.
-  **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 clockwise before you switch on the unit. Be careful to select a suitable volume at all times.**
- 4 You can connect the UCG102 to your guitar via the guitar input (¼" jack). Use a commercial ¼" mono jack cable.
 - 5 You can modify the guitar signal with the *LEVEL* switch. At high signal levels, the CLIP LED (above the BEHRINGER LOGO) will light up red in which case you should set the *LEVEL* switch to LOW.
 - 6 The blue LED indicates the status of the USB connection.

3 SOFTWARE

3.1 Included software

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The UCG102 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” from Native Instruments which are to be found on the provided CD with the installation guide and user’s manual.

The Native Instruments “Guitar Combos BEHRINGER Edition” series combines outstanding sound quality with maximum ease of use and playability.

Classic Combos

The 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 revolutionized 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 unmistakable 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

GUITAR LINK UCG102

follow the instructions found in the NI-BEHRINGER-Shop, i.e. the shopping cart.

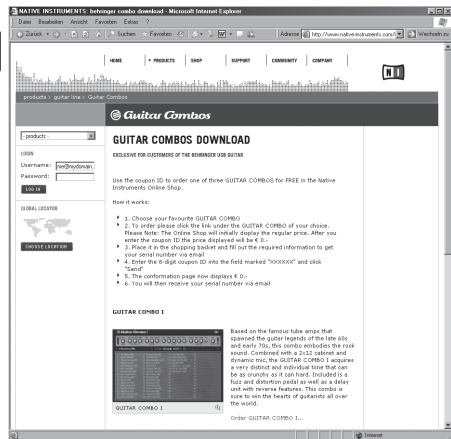


Fig. 3.1: Starting of NI-BEHRINGER-Shop

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

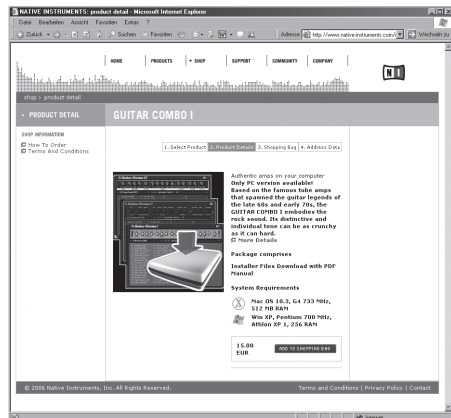




Fig. 3.2: Second step “2. Product Details” of NI-BEHRINGER-Shop

3.2 System requirements

To connect the GUITAR LINK UCG102 to a computer, you need a free USB slot.

 **The UCG102 is compatible with both PCs and Mac computers. Therefore, no installation procedure or drivers are required for the correct functioning of the UCG102. As soon as you connect the UCG102 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.**

If you want to use the guitar for real-time applications on the PC, for example, to record 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).

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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

en A device driver is an interface that ensures communication between the software (audio application) and the hardware (your UCG102). 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 operating system’s “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, Traktion, 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.

With the OS X operating system, there is only one driver model, the CoreAudio driver. Thus, there’s no need to worry about selecting a driver.

4 APPLICATION EXAMPLE

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You can connect the UCG102 directly to your computer in order to record, play along to a playback or play directly over the modeling amps and effects. The UCG102 lets you get started immediately, wherever you are. Simply hook up and start to rock.

4.1 Operation of the connector

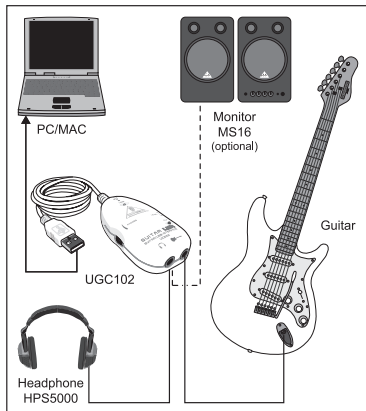


Fig. 4.1: Wiring of the UCG102

Use the USB cable to connect the GUITAR LINK UCG102 to your computer. The USB unit of the UCG102 is bus powered—no separate power supply is needed. The blue LED (6) lights up and the system indicates the connection of a USB audio unit.

Connect your headphones to the PHONES connector on the UCG102.

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 Series, MS16, MS20, MS40, B2030A or B2031A are perfect choices for this application.

5 AUDIO CONNECTIONS

With the integrated USB interface, you can change your computer to an ultimate recording studio. Whether you rehearse at home or in the studio, the used audio connections always remain the same.

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5.1 Wiring

You connect the UCG102 to your guitar via a standard instrument cable.

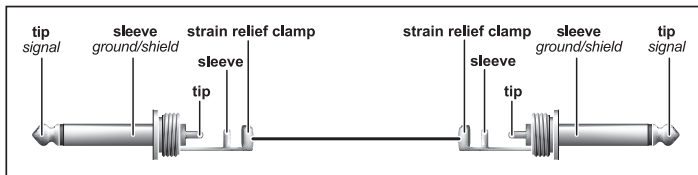


Fig. 5.1: Unbalanced instrument cable with 1/4" TS connector

5.2 Headphone connection

The UCG102 provides a connection for headphones. You can connect any standard commercial headphone with a 1/4" 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.

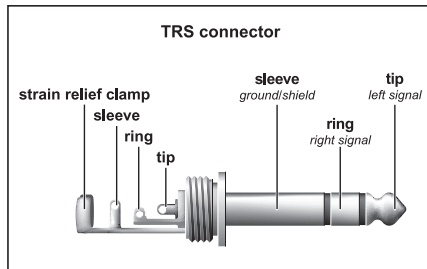


Fig. 5.2: TRS stereo connector

5.3 USB cable

The UCG102 comes with a USB cable for connecting USB-compatible devices like notebooks.



6 SPECIFICATIONS

GUITAR IN

Connector	¼" TRS
Input Impedance (High)	250 k Ω
Input Impedance (Low)	400 k Ω

PHONES OUT

Connector	1/8" TRS stereo jack
Output impedance	approx. 50 Ω
Max. output pegel	-2 dBu, 2 x 3.7 mW @ 100 Ω

USB 1.1

Connector	type A
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DIGITAL PROCESSING

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

POWER SUPPLY

USB connection	5 V \overline{DC} , 100 mA max.
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DIMENSIONS/WEIGHT

Dimensions (H x W x D)	24.6 mm x 95.6 mm x 50.8 mm 0.97" x 3.75" x 2.00"
Cable length	150 mm
Weight	0.092 kg

SYSTEM REQUIREMENTS (PC / MAC)

Windows XP, Pentium 700 MHz or Athlon XP 1.33 GHz,
256 MB RAM

Mac OS X v10.3.x, G4 733 MHz, 512 MB RAM

DRIVER

Windows	BEHRINGER USB AUDIO
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.

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, 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.

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§ 4 RETURN AUTHORIZATION NUMBER

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1. To obtain warranty service, the buyer (or his authorized dealer) must call BEHRINGER 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. Damage/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.
 - ▲ damage/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.

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FEDERAL COMMUNICATIONS COMMISSION

COMPLIANCE INFORMATION



Responsible party name: BEHRINGER USA, Inc.
Address: 18912 North Creek Parkway, Suite 200
Bothell, WA 98011, USA
Phone/Fax No.: Phone: +1 425 672 0816,
Fax: +1 425 673 7647

hereby declares that the product

GUITAR LINK UCG102

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 BEHRINGER USA can void the user's authority to use the equipment.