

WARWICK OWNER'S MANUAL

BASS COMBOS

BC20 BC40 BC80 BC150

Warwick[®]
Basses, Amps & Rock'n Roll.



Family Owned ♦ Solar Powered ♦ Sustainably Manufactured in a Green Environment

WARWICK BC SERIES COMBOS

OWNER'S MANUAL

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ENGLISH

COMBO

WARWICK BC SERIES COMBOS

OWNER'S MANUAL

A series of compact amplifiers for Bass instruments like nothing you have seen or heard before. These full frequency, extended headroom, integrated combo amps could be used for virtually any amplified instrument but are specifically tuned to the unique needs of Electric and Upright Bassists.

Consumers of recorded music have grown accustomed to the improvements in performance and sound resulting from the development of high quality, lower cost electronics. The bass world has enjoyed little benefit from this progress. Warwick's new line of compact Bass Instrument Combo amps is destined to change this by introducing improvements in circuit design, speaker design, manufacturing, and much improved component integration.

Our considerations in these amp designs were multifold and our objective is to provide:

- An aspiring bass player's first amp.
- A seasoned professional's "residential amp" (to be used for practicing and pleasure playing at home).
- A backstage tune-up/warm-up amp.
- A teacher's amp where both the student and the teacher can plug in simultaneously while playing musical examples with a music player through the auxiliary input.
- An amp for rehearsals, where space and sound levels are limited.

Here is a short explanation of the underlying design concepts.

CLASS-A CIRCUITRY

Class-A amplifiers are typically more linear and, as such, are less complex than other amplifier classes. The amplifying element is biased so the device is always conducting to some extent. This means the amplifier is always on, avoiding the problem of crossover distortion associated with class-AB and -B designs.

LOW-Z CIRCUITRY

By lowering the impedance inside an electronic circuit you lower the amount of thermal noise. In an amp where you have tone controls that lift mids and highs a considerable amount, proper impedance level makes the difference between enduring audible annoying hiss, and enjoying a pleasant tonal experience.

DYNAMIC DISTORTION LIMITER™

Distortion occurs when an amplifier works beyond its range, when the power supply cannot supply the power any more to take the amp higher. A common method to control distortion in amps is to use a limiter, a device that stops the signal going beyond a specific level. Audio limiters work by setting a threshold signal level where the circuit kicks in and keeps signal levels within the capabilities of the power supply. This method is not very precise and often causes audible effects such as pumping and thumps. We designed a circuit that instead reads the distortion level in the power amp and starts limiting as soon as the amp shows even miniscule amounts of distortion. This means our amps always stay within 0.3% distortion (THD) when most amps are rated at between 5-10% distortion (that means that to get your 20 Watt out of a 20 Watt amp you will get it audibly distorted and if you want a clean signal the power will be a lot less).

There are desirable types of distortion, but these are not usually associated with transistor amplifiers, but more commonly associated with tube amps and effect pedals. Warwick's goal is to give the user a great, clean sound allowing the user to decide how much, and what kind of distortion to employ.

INTEGRATED SPEAKER DESIGN

All the speaker drivers and cabinets have been designed in tandem with the electronics to create units that work together efficiently. Careful consideration has been taken to modify all parameters, thereby achieving the best results in sound and performance. All components reflect a custom designed solution to give the end user optimum control over his/her tone, volume and configuration.

COMBO

SAFETY

Caution: To reduce the risk of electrical shock, do not remove the cover as there are no user serviceable parts inside. Refer servicing to qualified personnel.



This symbol, wherever it appears, alerts you to the presence of non-insulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute risk of shock..



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Read the manual.




IMPORTANT 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 block any ventilation openings. Install in accordance with the manufacture's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is 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 the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use 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 or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug the apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified 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 has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus
16. Never set the amplifier on a support that might give out under its weight.
17. **WARNING:** The mains plug used as disconnect device, the disconnect device shall remain readily operable.
18. Replace fuse with rated value, never bridge defective fuses. Before changing fuse disconnect power cable from unit!





19.  Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

FOR BC20, BC40 AND BC80:



These amplifiers are double insulated electrical appliances whereas BC150 has a protective earthing/grounding connection and will be discussed in the next chapter.

This equipment is a Class II or double insulated electrical appliance. It has been designed in such a way that it does not require a safety connection to electrical earth (grounding).

FOR BC150:



1. The apparatus should be connected to a mains socket outlet with a protective earthing/grounding connection.
2. Replace fuse with identically rated fuse and never bridge defective fuses. Before changing fuse, disconnect power cable from unit!

BC20

- Combo amplifier for bass instruments
- Passive and active inputs
- Class-A preamp with Low-Z circuitry for minimum noise and maximum headroom
- 20 watt power amp
- 8" Warwick WXC 8/8 bass driver
- 2" Warwick WTR 2/8 neodymium high-frequency driver
- 3-Way EQ with controls for bass, mid and treble
- DDL (Dynamic Distortion Limiter) for distortion-free reproduction at all levels
- Aux mini jack stereo input (iPod, MP3 player, CD player)
- Self-cooling construction (fanless operation)
- Dedicated stereo headphone amplifier
- Bass reflex speaker cabinet
- Protective speaker grille of rugged steel
- Weight: 9kgs/19.8lbs.
- Dimensions: (W/H/D) 310 x 390 x 370mm / 12.20" x 15.35" x 14.56"



TECHNICAL SPECIFICATIONS:

Input sensitivity:

Active input	360mV/50K Ω
Passive input	110mV/500K Ω
Aux input	750mV/50K Ω

Tone controls:

Bass	+/- 12dB @ 60Hz
Mid	+/- 12dB @ 800Hz
Treble	+/- 12dB @ 10kHz

Output Power: 20W @ 8 Ω

Frequency response: 20Hz-20 kHz +/-0.5 dB

THD less than 0.3% at rated output power

Power consumption: 43W

Speaker specifications:

8" Bass Driver: 20W, Impedance: 8 Ω , SPL: 90 dB,
Frequency response: 80Hz – 10 kHz

2" HF Driver with Horn: 10W, Impedance: 8 Ω , SPL: 97 dB
Frequency response: 1 kHz – 20 kHz

BC40

- Combo amplifier for bass Instruments
- Passive and active inputs
- Class-A preamp with Low-Z circuitry for minimum noise and maximum headroom
- 40 watt power amp
- 10" Warwick WXC 10/8 bass driver
- 2" Warwick WTR 2/8 neodymium high-frequency driver
- 3-Way EQ with controls for bass, mid and treble
- DDL (Dynamic Distortion Limiter) for distortion-free reproduction at all levels
- Aux mini jack stereo input (iPod, MP3 player, CD player)
- Self-cooling construction (fanless operation)
- Dedicated stereo headphone amplifier
- Bass reflex speaker cabinet
- Protective speaker grille of rugged steel
- Weight: 15kgs/33lbs.
- Dimensions: (W/H/D) 360/440/370mm 14.17"/17.32"/14.56"



TECHNICAL SPECIFICATIONS:

Input sensitivity:

Active input	570mV/50K Ω
Passive input	180mV/500K Ω
Aux input	730mV/50K Ω

Tone controls:

Bass	+/- 12dB @ 60Hz
Mid	+/- 12dB @ 800Hz
Treble	+/- 12dB @ 10 kHz

Output Power: 40W @ 8 Ω

Frequency response: 20Hz-20 kHz +/-0.5 dB

THD: 0.02% at rated output power

Power consumption: 78W

Speaker specifications:

10" Bass Driver: 40W, Impedance: 8 Ω , SPL: 89 dB,
Frequency response: 50Hz – 8 kHz

2" HF Driver with Horn: 10W, Impedance: 8 Ω , SPL: 97 dB
Frequency response: 1 kHz – 20 kHz

COMBO

BC80

- Combo amplifier for bass Instruments
- Passive and active inputs
- Line out
- Send/Return on front panel
- Class-A preamp with Low-Z circuitry for minimum noise and maximum headroom
- 80 watt power amp
- 12" Warwick WXC 12/8 bass driver
- 2" Warwick WTR 2/8 neodymium highfrequency driver
- 4-Way EQ with controls for bass, low-mid, high-mid and treble
- DDL (Dynamic Distortion Limiter) for distortion-free reproduction at all levels
- Aux mini jack stereo input (iPod, MP3 player, CD player)
- Self-cooling construction (fanless operation)
- Dedicated stereo headphone amplifier
- Bass reflex speaker cabinet
- Protective speaker grille of rugged steel
- Weight: 20kgs/44lbs.
- Dimensions: (W/H/D) 410 x 490 x 370mm / 16.14" x 19.29" x 14.56"



TECHNICAL SPECIFICATIONS:

Input sensitivity:

Active input	380mV/50K Ω
Passive input	130mV/500K Ω
Aux input	630mV/50K Ω

Tone controls:

Bass	+/- 12dB @ 60Hz
Low Mid	+/- 8dB @ 800Hz
High Mid	+/- 8dB @ 2500Hz
Treble	+/- 12dB @ 10 kHz

Output Power: 80W @ 8 Ω

Frequency response: 20Hz-20 kHz +/-0.5 dB

THD: 0.02% at rated output power

Power consumption: 160W

Speaker specifications:

12" Bass Driver: 80W, Impedance: 8 Ω , SPL: 94 dB,
Frequency response: 80 Hz – 5 kHz

2" HF Driver with Horn: 10W, Impedance: 8 Ω , SPL: 97dB
Frequency response: 1 kHz – 20 kHz

BC150

- Combo amplifier for bass Instruments
- Passive and active inputs
- Line out
- Send/Return on front panel
- Class-A preamp with Low-Z circuitry for minimum noise and maximum headroom
- 150 watt power amp
- 15" Warwick WXC 15/8 bass driver
- 4" Warwick WTR 4/8 high-frequency driver
- 4-Way EQ with controls for bass, low-mid, high-mid and treble
- DDL (Dynamic Distortion Limiter) for distortion-free reproduction at all levels
- Aux mini jack stereo input (iPod, MP3 player, CD player)
- Self-cooling construction (fanless operation)
- Dedicated stereo headphone amplifier
- Bass reflex speaker cabinet
- Protective speaker grille of rugged steel
- Weight: 24kgs/53lbs.
- Dimensions: (W/H/D) 530 x 545 x 380mm / 20.86" x 21.45" x 14.96"



TECHNICAL SPECIFICATIONS:

Input sensitivity:

Active input	440mV/50K Ω
Passive input	120mV/500K Ω
Aux input	660mV/50K Ω

Tone controls:

Bass	+/- 12dB @ 60Hz
Low Mid	+/- 8dB @ 800Hz
High Mid	+/- 8dB @ 2500Hz
Treble	+/- 12dB @ 10 kHz

Output Power: 150W @ 8 Ω

Frequency response: 20Hz-20 kHz +/-0.5 dB

THD: 0.02% at rated output power

Power consumption: 300W

Speaker specifications:

15" Bass Driver: 150W, Impedance: 8 Ω , SPL: 95 dB,
Frequency response: 70 – 3 kHz

4" HF Driver with Horn: 30W, Impedance: 8 Ω ,
SPL: 98 dB

Frequency response: 1.8 kHz – 16 kHz

COMBO

GETTING STARTED

1. Unpacking – Carefully unpack unit from the carton box.
2. Connecting to power – Set the power switch in off position, connect the supplied power cord to the amplifier and then connect the same cord into AC outlet of proper voltage.
3. Setting front panel controls – Set VOLUME control to zero, all other controls should be settled to neutral, middle position.
4. Connecting instrument – Using an instrumental cable (shielded) connect your instrument to the proper ACTIVE or PASSIVE input. Turn all volume controls of your guitar to their maximum. Now press power switch on.
5. Adjusting your individual settings – Set the VOLUME to the value you wish to play, you should now hear sound from the speaker. Adjust controls to your liking.

COMBO

FRONT PANEL CONTROLS

BC20 AND BC40



ACTIVE

– Input to plug in instrument using shielded guitar cable. This input is low sensitivity to suit the output from instruments with active electronics.

PASSIVE

– Input to plug in instrument using shielded guitar cable. This input is high sensitivity to suit the output from instruments with passive electronics.

VOLUME

– Controls the sound level of your instrument. Adjust this for your preferred playing loudness.

BASS

– Shelving Bass Control gives +/- 12 dB gain at 60 Hz. The control is flat at the center position.

MIDDLE

– Peaking Middle Control gives +/- 12 dB gain at 800 Hz. The control is flat at the center position.

TREBLE

– Shelving Treble Control gives +/- 12 dB gain at 10kHz. The control is flat at the center position.

AUX IN

– Input to connect external sound source. This can be used for plugging a CD, tape or MP3 player into the amp or for connecting an external preamp.

HEADPHONE

– For practice use in situations when speakers are too loud. Dedicated Stereo Headphone amp where the aux input will be played back in stereo and the instrument signal will be reproduced in the center of the stereo field.



COMBO

FRONT PANEL CONTROLS

BC80 AND BC150



ACTIVE

– Input to plug in instrument using shielded guitar cable. This input is low sensitivity to suit the output from instruments with active electronics.

PASSIVE

– Input to plug in instrument using shielded guitar cable. This input is high sensitivity to suit the output from instruments with passive electronics.

VOLUME

– Controls the sound level of your instrument. Adjust this for your preferred playing loudness .

BASS

– Shelving Bass Control gives +/- 12 dB gain at 60 Hz. The control is flat at the center position.

LOW MID

– Peaking Middle Control gives +/- 8 dB gain at 800 Hz. The control is flat at the center position.

HIGH MID

– Peaking Middle Control gives +/- 8 dB gain at 2.5 kHz. The control is flat at the center position.

TREBLE

– Shelving Treble Control gives +/- 12 dB gain at 10kHz. The control is flat at the center position.

AUX IN

– Input to connect external sound source. This can be used for plugging a CD, tape or MP3 player into the amp or for connecting an external preamp.

HEADPHONE

– For practice use in situations when speakers are too loud. Dedicated Stereo Headphone amp where the aux input will be played back in stereo and the instrument signal will be reproduced in the center of the stereo field.

LINE OUT

– For connecting Amp to PA system, recording device or similar.

SEND RETURN

– Here you can connect effects boxes and similar for insertion in the effects loop.



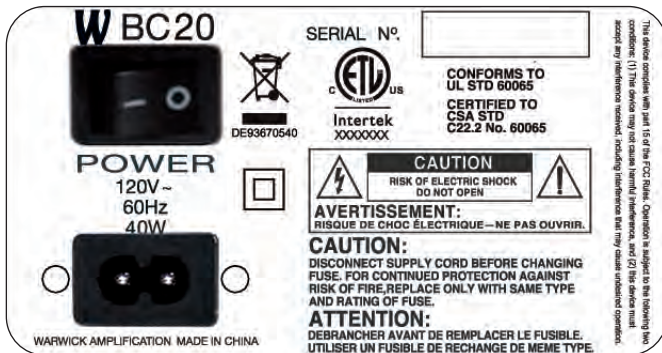
COMBO

REAR PANEL CONTROLS

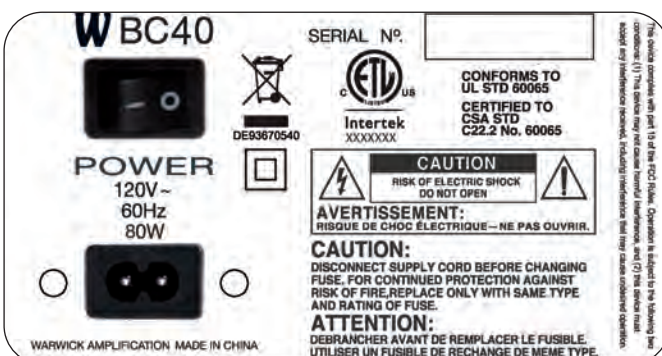
MAINS IN AC POWER

- Figure-eight socket for connection to the mains power supply.
- On/off switch for main power. For your safety, remember to connect power cord to the amplifier first, then to the AC outlet. After this is done, turn this switch on. It works backwards when you want disconnect unit – firstly turn switch off, then disconnect cord from the AC outlet and finally disconnect cord from amplifier.

BC20



BC40



REAR PANEL CONTROLS

BC80



BC150

MAINS IN AC POWER

- AC terminal with integrated fuse compartment for connection to the mains power supply.
- On/off switch for main power. For your safety, remember to connect power cord to the amplifier first, then to the AC outlet. After this is done, turn this switch on. It works backwards when you want disconnect unit – firstly turn switch off, then disconnect cord from the AC outlet and finally disconnect cord from amplifier.



TROUBLESHOOTING

When your unit seems not to work properly, take a few minutes to troubleshoot before calling service. You can save yourself time and money by doing it yourself, because the source of problem is often something quite simple.

What is the problem?

1. There is no sound from the amp and LEDs don't light up. -> Check your AC outlet
 - 1.1. Outlet is ok. -> Check power cord, unit fuses (BC150 only, BC20, BC40 and BC80 has no user serviceable fuses) and power switch.
 - 1.2. No power in outlet. -> Check house fuse box.

2. There is no sound from the amp with LEDs Lit. -> Check amp gain and/or volume controls, check guitar controls. If controls are ok and all set above zero then listen for hum in the speaker.
 - 2.1. There is no hum in the speaker. -> Internal speaker or power amp may need serviced.
 - 2.2. There is small hum in the speaker. -> Unplug guitar, touch tip of cable and listen.
 - 2.2.1. Hum is now very loud. -> Check your guitar electronics or try different guitar.
 - 2.2.2. Hum does not change. -> Replace your guitar cable.

3. Sound quality is poor. -> Replace your guitar cable. If this does not help then check your speaker and speaker cable.

If the problem is not covered by the above or if our solutions does not help then please contact Warwick service information.

Our Heads and Combos have all the following approvals:



COMBO

**Please see the new Warwick Bass Forum on www.warwick.de
For support information please refer to support@warwick.de**

**Visite por favor el nuevo forum Warwick de bajo en www.warwick.de
Para soporte técnico e información, dirigirse por favor a support@warwick.de**

**Por favor veja o novo Fórum de Baixos da Warwick em HYPERLINK www.warwick.de
Para mais informações escreva para HYPERLINK support@warwick.de**

**Visitare il nuovo Forum Warwick Bass: www.warwick.de
Per supporto tecnico: support@warwick.de**

**Veillez consulter le nouveau forum sur les basses Warwick à l'adresse www.warwick.de
Si vous avez besoin de plus d'informations contactez support@warwick.de**

**Das neue Warwick Bass Forum finden Sie auf www.warwick.de
Bei technischen Fragen wenden Sie sich bitte an support@warwick.de**

**Nové Warwick Bass Forum najdete na webových stránkách: HYPERLINK "<http://www.warwick.de>
Máte-li nějaké technické dotazy, pište na: support@warwick.de**

**ワーウィック・ウェブサイトへお越してください。HYPERLINK "<http://www.warwick.de>"
リニューアルしたワーウィックベースフォーラムをご覧ください。
サポート情報などは HYPERLINK "<mailto:support@warwick.de>" へお寄せください。**

**인터넷 홈페이지 : <http://www.warwick.de>
새로운 Warwick 베이스 포럼을 참고하시려면 www.warwick.de에 방문하십시오.
고객 지원을 받으시려면 support@warwick.de에 메일을 보내십시오.**

**请登录 HYPERLINK "<http://www.warwick.de>" 浏览握威贝司全新论坛
有任何问题 请发邮件至 HYPERLINK "<mailto:support@warwick.de>"**

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