MANUAL

Wamp300
Wamp400
WP4-7

Warwick®
AMPLIFICATION.

ENGLISH

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DEUTSCH

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SPECIFICATIONS

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- Congratulations on the purchase of the WARWICK Wamp 300 or 400 amplifier head or WP4–7 preamp

- Please read these instructions through before connecting up the device or switching on.

- If you stick to the guidelines set out in this introduction, you will quickly be able to appreciate the quality of your new Warwick amplifier. Please keep this instruction booklet handy in case you need to consult it again.

- Please send your **AMPLIFICATION PASSPORT** to the address indicated therein.

RECOMMENDATIONS

The following recommendations are designed to ensure that your Warwick device always functions reliably:

- **Never open the casing! To do so would expose you to the risk of an electric shock. Should repairs prove necessary, leave them to qualified service personnel.**
- Dust, high moisture levels, direct sunlight and temperature extremes (whether high or low) should be avoided.
- Safeguard the device from excessive vibration.
- Always place the device on a stable, horizontal surface.
- Ensure the device is adequately ventilated. It should not be placed on soft surfaces (such as a carpets, cushions etc.). When installing the device in a rack, take care that the cooling vents remain unobstructed.
- Avoid leaving the device near radiators or electrical devices radiating heat.
- Internal components may only be adjusted or cleaned by qualified service technicians.
- Make sure that no object or liquid ever penetrates the device through an air vent.
- The device should be submitted to qualified service technicians for examination in any of the following cases:

– the mains lead or mains switch have been damaged,
– objects or liquids have penetrated the device,
– the device has been exposed to excessive humidity,
– the device has malfunctioned or abnormal operating conditions have been observed,
– the device has been dropped or the casing damaged.

PROTECTIVE FEATURES

This Warwick device is equipped with a series of circuits to detect and protect your device from unfavourable operating conditions:

Power-up delay
When you switch the device on, there is a slight delay before the SPEAKER OUT circuit is activated. This is designed to protect the loudspeaker.

Short-circuit
In the event of a short-circuit, the current is quickly reduced by a circuit designed to prevent the destruction of the output stage transistors.

Direct current
This circuit continuously monitors the output of the power amp for direct current, and protects the loudspeaker from overload should a power transistor burn out.

HF oscillation
Damage that could otherwise be caused by frequencies in excess of 20 kHz (feedback etc.) is prevented by a safety device that switches off the power amp.

Excessive temperatures
Should the device be driven at full power when exposed to bright sunlight or poorly installed in a rack, a circuit will prevent overheating destroying the output stage transistors.

Note:
Should one of the protective circuits have been activated as a result of a fault, this fact is indicated by the **STANDBY LED going on and remaining on,** even when you have not selected STANDBY mode.

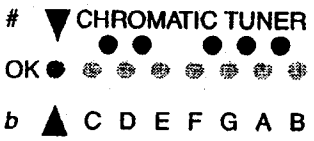
PASSIVE input
Jack socket for connecting a bass without active sound control or with a low output signal.
ACTIVE input
Jack socket for connecting a bass with active sound control or a high output signal.
GAIN control + 3 LEDs
Allows you to find the correct input level.

CLIP LED	= too high
OK LED	= correct
LOW LED	= too low

LINEAR switch + LED
Switches the tone controls of the device off. When depressed, the signal is switched linear (ie the 3-band, turbo and graphic EQ settings are all disregarded).
The green LED illuminates when the tone controls are not in use.
TURBO BASS switch + LED
Boosts the sub-bass region (20–40 Hz) independently of all other tone settings.
The red LED illuminates when Turbo Bass is selected.
BASS control
Increases or decreases the level of low frequencies with special emphasis upon those between 60 and 130 Hz. Focal point 90 Hz.
MID LEVEL control
Increases or decreases the level of frequencies set by the MID FREQ control.
MID FREQ control
Selects the frequency (between 172 and 2600 Hz) to be most effected (whether boosted or attenuated) by the MID LEVEL control, i.e. the focal point.
TREBLE control
Increases or decreases the level of frequencies in the range 2 kHz to 8 kHz. Focal point 6 kHz.

TURBO HIGH switch + LED
Boosts the high frequency region (8–20 kHz) independently of all other tone settings.
The red LED illuminates when Turbo High is selected.
DI PRE/POST EQ switch + LED
Gives you the option of sending either the linear (PRE) signal or the (POST) signal (in which all the tone settings and inserted effects are present) to the DI Output (➞ Mixer).
The yellow LED illuminates when the DI output is switched POST.
GRAPH EQ switch + LED
Switches the graphic equalizer on or off.
The yellow LED illuminates when the EQ settings are effective. The effect of the equalizer and that of the 3-band/turbo tone controls are cumulative.
GRAPH EQ faders
7 faders (5 in the case of the Wamp 300) boost or attenuate the frequencies indicated.
LEVEL fader
Determines the degree to which the EQ settings (taken as a whole) influence the signal. (0 = no effect; 10 = maximum effect).
MASTER control
Sets the output level of the SPEAKER OUT socket (rear panel) and PHONES socket (front panel).
PHONES output (Stereo)
Jack socket for connecting a headphone.
STANDBY switch + LED
Switches the device's power amp, DI OUT and LINE OUT off (for a pause during play, tuning the instrument, practising with headphones etc.).
The red LED indicates that the device is in standby mode.
POWER switch + LED
For switching the device on and off.
When it is on, the green LED is lit.

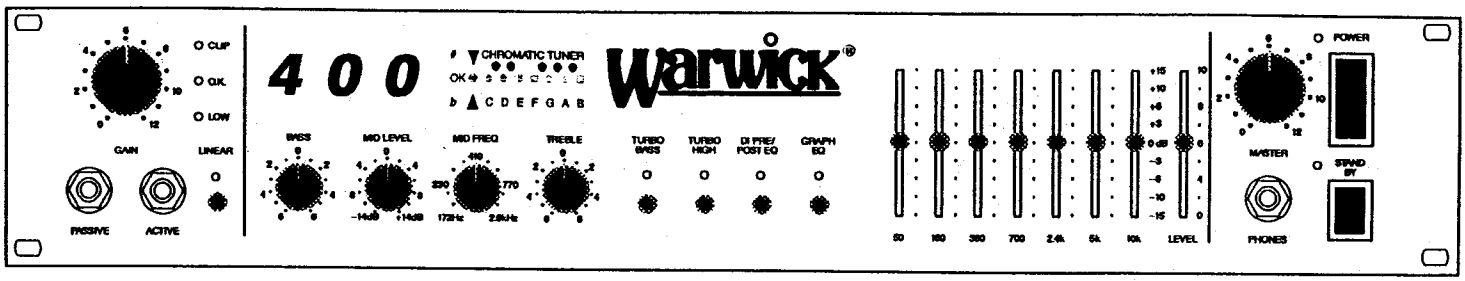
CHROMATIC TUNER



The built-in tuner sports seven yellow and five red LEDs, arranged like the keys on a piano, which indicate the nearest note at concert pitch (A=440 Hz) to that sounded when you play a string. Additionally, two red triangular LEDs and a green round LED are used to indicate whether the string played is sharp (too high), flat (too low) or in tune with the note indicated.

- Switch the amp to **STANDBY** mode. The tuner is activated and the 'OK' LED blinks.
- Play an open string. One of the LEDs forming the 'keyboard' will illuminate to indicate the note nearest to that played.

A short time later, one of the LEDs to the left of the display will indicate whether the string played is sharp, flat or in tune with the note indicated. If the string is sharp, the triangle marked '#' will blink. If the string is flat, the triangle marked 'b' will blink.
As you bring the pitch of the string closer and closer to the note indicated by the 'keyboard' display, the relevant triangle will blink more and more slowly. When finally the string played is in tune with the note indicated, the green 'OK' LED will illuminate.
When you have finished tuning, deselect **STANDBY** mode and the amp is again ready to play.



GETTING STARTED

- Make sure that a loudspeaker capable of sustaining the load of a bass signal is connected to the **SPEAKER OUT** socket or (in the case of the WP4–7) to the Power Amp/SPEAKER OUT socket.
- Check that the device has been plugged in.
- Set the **MASTER** Control to zero.
- Use the **PASSIVE** socket if your bass has no active tone control, and the **ACTIVE** socket if your bass is equipped with active tone control.
- Push the **LINEAR** button in (deactivating the 3-band and turbo tone controls and the graphic equalizer).
- Switch the device on, using the **POWER** switch. (The green LED will illuminate).
- Press the **STANDBY** button to deselect standby mode. (The red LED will go out).
- Turn all the volume controls of your bass guitar to their maximum level.
- Adjust the **GAIN** control until the **OK** LED remains illuminated whilst you are playing. The **CLIP** LED, on the other hand, should seldom if ever light (and then only momentarily).
- Using the **MASTER** control set the volume for the connected speaker.
- Set the tone controls of your bass to approximate to the sound you want.

TONE CONTROL

With its 3–band tone controls (the middle band being parametric) and two independently selectable turbo frequency bands, the device offers powerful sound texturing options, giving access to a wide range of timbres.
A further and highly intuitive layer of tone control is provided by the faders of the graphic equalizer, whose status can be read at a glance.
All control parameters have been designed according to principles derived from audio–physiological research, with the result that subtle changes in texture are noticeable across their entire range.

NOTE: changing the tone control settings can effect the input level. If this happens readjust the **GAIN** control.

The presence of two independent systems of tone control (in addition to that provided by your instrument) gives rise to a number of possible configurations:
1) GRAPHIC EQ=off/LINEAR=off:
The 3–band section is active. The graphic equalizer is not.
2) GRAPHIC EQ=**on**/LINEAR=off:
Both systems combine to produce a single timbre.
3) LINEAR=**on**/GRAPHIC EQ=off:
Neither system is active. The only effective tone control is that of your instrument.

Granted a foot switch and a little skill in presetting the two systems, you can alternate at will between two quite different sounds in performance. For example:
- Basic sound (3–band) – Solo sound (Graph EQ)
- Loud – soft
- Basic sound – Slap sound (harder)
- 4-string – 5-string
- Fretted – fretless etc.

Frequency diagrams are to be found at the back of this booklet

AC VOLTAGE terminal
Socket for the connection of a mains cable and built-in fuse compartment (WP4–7 with electronic protection).
SPEAKER OUT sockets (except WP4–7)
An XLR/Switchcraft and a jack socket for connecting a loudspeaker.
LINE OUT socket (WP4–7: 2 sockets)
For connection to an external power amp.
LINE IN socket (except WP4–7)
To insert a signal (eg from a drum computer) before the internal power stage.
FOOT SWITCH socket
For connecting a foot switch to toggle between activation and deactivation of the graphic equalizer. (The GRAPH EQ button on the front panel has priority).
EFF.SEND socket
Mono output for connection to the input of an effects device.
LOW CUT switch
Confines the output of the EFF.SEND socket to frequencies suitable for most effects devices (i.e. those above 200 Hz).
GROUND LIFT switch
Lifts the signal ground and completely isolates it from the chassis.

EFF.RETURN socket + **LOW CUT** switch
LEFT/MONO + RIGHT sockets for the connection of mono or stereo effects devices. If no second amp is connected to the LINE OUT, the stereo effects signal is mixed down internally to a mono signal. Otherwise (ie when a further power stage and speaker is connected) the left effects channel is retained by the amp and the right directed to the LINE OUT socket. The effects-free bass signal is retained on both channels.
By means of the LOW CUT switch, your Warwick WP4–7 preamp and Wamp 300/400 can be operated in two different modes.
LOW CUT **off** = insert mode
Insertion of the effects device into the signal path. The mix is controlled by the Mix/Balance control of the effects device.
LOW CUT **on (►)** = parallel mode
Splitting of the signal (one branch only ➡ EFF.SEND). The effects modified and unmodified signals are reunited at a later stage.

DI OUT
Symmetrical and electrically regulated signal to supply a stage or studio mixing console.
When both DI OUT sockets are connected to a mixer (not Wamp 300), the best results are obtained when one panorama control is set 100% left and the other 100% right. The pure bass sound will remain in the middle.

IMPORTANT

Controls
The control functions of all devices in the Warwick Amplification Series reflect the results of the latest research in aural physiology. Not only the range but also the calibration of each controller have been minutely determined in the light of an understanding of the sensitivity of the human ear. As a result, you appear to move smoothly through the range as you rotate the nob, even though the mathematical progression of electrical values generated may be anything but simple.
To allow the individual parameters of the equalizer full scope for sophistication, the range of the Master Control is very wide. Maximum volume will be reached only (and depending upon the tone settings) between positions 8 and 10.

Fuses
Never replace a fuse with one of a different value. Fuses with higher values could destroy the device and render the guarantee void.

EFFECTS SEND/RETURN
These sockets allow you to insert a separate line level effects device (compressor, delay, reverb, chorus, flanger etc.). For the optimum settings, consult the manual of the relevant device.

Tip: compressors are not suitable for use in LOW CUT mode. Insert them between LINE OUT and LINE IN.
Foot pedals should only be inserted between the instrument and the amp.

Rear panel and block diagrams are to be found at the back of this booklet along with all technical data.