







# **THANK YOU!**

Thank you for choosing Orange. You are now a member of the 'Legendary British Guitar Amplifier' owners club!

Since 1968 when the company was founded, Orange has been a pioneering force in the guitar amplification industry. Today, with a team of the world's finest amplifier engineers, Orange continues to push back the boundaries of conventional tube amplifier design.



Our commitment to craftsmanship and quality control has allowed our amplifiers to stand the test of time, giving their owners as much pleasure now, as the day they were bought. To maintain this level of excellence, each Orange amplifier is put through many rigorous test procedures before leaving the factory.

The warmth, tonal quality and rich harmonics generated by a valve amplifier cannot be reproduced by 'artificial' means. Many guitarists have reached the same conclusion: neither the transistor nor microchip is a suitable alternative to valve technology.

This booklet contains valuable technical and safety information Please take the time to read this manual as the information may enhance the sound and performance of your amplifier. We are confident that you will be delighted with your new purchase and that it will provide you with many years of enjoyment.



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# **CONTACT DETAILS**

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# **IMPORTANT SAFETY INFORMATION**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. Terminals labelled as

"Speaker Outputs" must be connected to a speaker cabinet of the designated load rating using an un-shielded two conductor cable for speaker use at all times during operation



The exclamation point within an equilateral triangle and "WARNING" are intended to alert the user to the presence of important operating instructions. Failure to heed the instructions will result in severe injury or death.

- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near liquid.
- Clean only with dry cloth.



- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades, one wider than the other. A grounding type 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.
- Servicing: Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards.
- Refer all servicing to qualified service personnel.
- Damage Requiring Service: Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions: (a) When the power-supply cord or plug is damaged; (b) If liquid has been spilled, or objects have fallen into the product; (c) If the product has been exposed to rain or water; (d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation; (e) if the product has been dropped or damaged in any way; (f) when the product exhibits a distinct change in performance this indicates a need for service.
- Replacement Parts: When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.













This Orange Amplifier conforms to UL Standard 60065 for Audio, Video and Similar Electronic Apparatus - Safety Requirements;

Certified to CAN/CSA-C22.2 No. 60065-03; IEC 60065 2001 + A1:2005

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.





# **USING YOUR AMPLIFIER**



#### IMPORTANT!

For countries or regions with a mains voltage of 115v or 120v, please switch the small, red mains selector to 115v or 120v and replace the fuse in the black pull out fuse tray, below the mains inlet, with the 120v version supplied.

For countries or regions with a mains voltage of 230v, please switch the small, red mains selector to 230v and replace the fuse in the black pull out fuse tray, below the mains inlet, with the 230v version supplied.

- 1. Connect the amplifier to a speaker cabinet of the correct impedance.
  - Connect 1 x 16ohm cabinet to the 16ohm speaker output jack socket.
  - Connect 1 x 80hm cabinet to either of the 80hm speaker output jack socket.
  - Connect 2 x 16ohm cabinets to both of the 8ohm speaker output jack sockets.
- 2. Connect the amplifier to a mains supply of the correct voltage as marked on the amplifier. Make sure that the HALF/STBY/FULL output switch is in the Standby (middle) position before switching the power switch to the ON position.



## 3. VOLUME CONTROL. (Clean channel)

The volume control adjusts the volume of the clean channel. High levels will overdrive the output stage in a vintage manner!

## 4. BASS CONTROL. (Clean channel)

The bass control adjusts the bass response of the clean channel. It also decreases midrange response when turned fully clockwise.

## 5. TREBLE CONTROL. (Clean channel)

The treble control adjusts the treble response of the clean channel.

These two controls are slightly interactive, creating a wider tonal range!

### 6. GAIN CONTROL. (Dirty channel)

The gain control adjusts the gain of the dirty channel.

High levels of gain will heavily overdrive the pre-amp and may sometimes be uncontrollable, especially when used at high volume levels!

# 7. SHAPE CONTROL. (Dirty channel)

The shape control adjusts between all midrange (zero) to all bass and treble and no midrange (maximum), on the dirty channel.

# 8. VOLUME CONTROL. (Dirty channel)

The volume control adjusts the output volume of the dirty channel.

High levels of volume will heavily overdrive the output stage!

#### 9. CHANNEL SWITCH.

The channel switch switches between the clean and dirty channel.

This switch needs to be switched to the dirty channel in order for the footswitch to function!



#### 11. FOOTSWITCH JACK SOCKET.

The footswitch jack socket (rear of amplifier) enables channel switching using any latching footswitch.

## 12. OUTPUT SWITCH. (HALF/STBY/FULL)

The output switch (found next to the power switch on front of amplifier) runs the valves at a low plate voltage (reducing output power and running in Class AB-1) in the HALF position and at a higher plate voltage (increasing output power and running in Class AB-2) in the FULL position. The middle position is the standby position. This switch should be in the standby position for around two minutes after first powering up the amplifier!

## 13. 2 OUTPUT TUBES/4 OUTPUT TUBES SWITCH.

The 2 Output Tubes/4 Output Tubes switch (found on rear of amplifier) removes two of the EL34 output valves, when in the 2 OUTPUT TUBES position. This switch also takes care of the speaker impedance (in the background), when in the 2 OUTPUT TUBES position. This means that the speaker impedance is always as stated in the screen print, above each speaker output jack socket, regardless of the position of this switch.

#### 14. OUTPUT POWER COMBINATIONS.

Output switch HALF, 2 OUTPUT TUBES = 35watts Class AB-1.

Output switch HALF, 4 OUTPUT TUBES = 70watts Class AB-1.

Output switch FULL, 2 OUTPUT TUBES = 50watts Class AB-2.

Output switch FULL, 4 OUTPUT TUBES = 100watts Class AB-2.

(The power amp will overdrive earlier when switched to the HALF, Class AB-1 position).





#### 15. EFFECTS LOOP SEND AND RETURN JACK SOCKETS.

The effects loop, send and return jack sockets are intended for use with outboard pedals or rack equipment such as delay, reverb and chorus etc. Effects such as wah-wah, fuzz, distortion etc, would probably be best placed between the guitar and amplifier input! The effects loop is wired in series with the pre-amp signal and is completely valve driven!

### 16. VALVES.

The TH100 contains  $4 \times 12AX7$  (ECC83) and  $1 \times 12AT7$  (ECC81) in the pre-amp and effects loop and  $4 \times EL34$  in the output stage.

# 17. HT FUSE. (T1Amp)

Please contact a qualified service technician if this fuse fails!





# VALVES AND FUSES CAN FAIL AT ANY TIME!

From time to time output and preamp valves may fail. We suggest that output valves are changed at least once a year and that all class AB models (50 watts and above) will benefit from having the bias checked and adjusted. Bias checking must be carried out by a qualified engineer.

Orange amps are protected from damage caused by valve failure and inconsistent mains voltage by various fuses. We recommend that Orange users have a set of spare valves and fuses.

For more information on maintenance and for accessories and spares, please visit

www.orangeamps.com

# FREE EXTENDED WARRANTY OFFER

Orange amplifiers are under warranty for one year subject to consumer protection laws in the country of purchase and distributor's terms and conditions, an additional year can be added by registering.

Valves and speakers supplied with an Orange amp or purchased separately at our online store are covered for 90 days from the date of purchase.

The warranty status of any Orange product is subject to its being used for its intended purpose in suitable conditions. As the manufacturer we reserve the right to refuse to warranty any Orange product which has been misused in any way whatsoever.

REGISTER RIGHT NOW AT <u>www.orangeamps.com</u>