



# Dual Dark 100

(Twin Channel)



ENGLISH



OWNER'S MANUAL

# ORANGE Dual Dark 100

(Twin Channel)

## 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 valve 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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The contents of this owner's manual may be subject to change without notice. The latest version is available for download on the official Orange Amplification website:

<http://www.orangeamps.com/support/downloads/>



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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.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.



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- 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 are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- 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



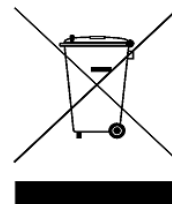
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work by a qualified technician to restore the product to its normal operation; (e) if the product has been dropped or damaged in any way; (f) when the product exhibits a distinct change in performance - this indicates a need for service.

- 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. Unauthorised 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 product complies with the WEEE Directive (2002/96/EC) marking requirement. This affixed product label indicates that you must not discard this electrical/electronic product in domestic household waste.



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## USING YOUR AMPLIFIER

### **IMPORTANT!**

**For countries or regions with a mains voltage of 120V, please switch the small mains selector to 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 mains selector to 230V and replace the fuse in the black pull out fuse tray, below the mains inlet, with the 230V version supplied.**

#### **Mains Fuse:**

T5 Amp for 120V.

T2.5 Amp for 230V.



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**Make sure the correct speaker load is connected (see Rear Panel Features):**

- 1 x 16 Ohm cabinet – Use the 16 Ohm speaker jack socket.
- 2 x 16 Ohm cabinets – Use both of the 8 Ohm speaker jack sockets.
- 1 x 8 Ohm cabinet – Use either of the 8 Ohm speaker jack sockets.

Switch the Power toggle to the 'On' position for around one minute before switching the Standby toggle to either the 'Half' or the 'Full' position to allow the valves to reach operating temperature.



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## FRONT PANEL FEATURES

(RIGHT TO LEFT)



### Input Jack Socket

Plug your instrument into this jack socket.



### Gain Control (Channel B)

This controls the gain level of Channel B.



### Shape Control (Channel B)

This controls the frequency sweep on Channel B. It adjusts between all midrange (minimum setting) to all bass and treble with no midrange (maximum setting).



### Volume Control (Channel B)

This controls the output volume of Channel B.



### Gain Control (Channel A)

This controls the gain level of Channel A.



### Bass Control (Channel A)

This controls the bass response of Channel A.



### Middle Control (Channel A)

This controls the midrange response of Channel A.





### Treble Control (Channel A)

This controls the treble response of Channel A.



### Volume Control (Channel A)

This controls the output volume of Channel A.



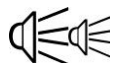
### Attenuator Control

This controls the amount of attenuation for both channels. Turn clockwise to reduce the overall volume level. This can be defeated using a latching footswitch.



### Channel Switch

This toggle switch switches between Channel A and Channel B. *(Note – The front panel channel toggle switch must be switched to Channel A for the footswitch to function.)*



### Full/Standby/Half Toggle Switch.

This turns on the operating voltages to the valves so that the amp is ready to play when switched to either the 'Half' or 'Full' position. Refer to the Rear Panel Features section for full output power options.



### Power Toggle Switch.

This turns on the mains power to the amplifier and allows the valves to warm up before use. *(Note – The Half/Standby/Full toggle switch should be in the 'Standby' position while the valves are warming up.)*

## REAR PANEL FEATURES



### Valve Effects Loop (Send and Return)

Use the 'Send' jack socket to go to the input of time based effects pedals or rack equipment such as delay, chorus, etc.

Use the 'Return' jack socket to return from the output of the effects being used.

*(Note – Effects such as overdrive, fuzz, wah wah, tuner, etc, are probably best placed between the instrument and the input of the amplifier.)*



### Attenuator Footswitch Jack Socket

Use any latching footswitch to defeat the Attenuator control.

*(Note – This works well for louder lead solos where extra gain is not required. An Orange footswitch will illuminate when the boost is **not** engaged.)*



### Channel Footswitch Jack Socket

Use any latching footswitch to change channel using this socket.

*(Note – The front panel channel toggle switch must be switched to Channel A for the footswitch to function.)*



### Speaker Jack Sockets (16 Ohm, 8 Ohm, 8 Ohm)

Please refer to 'Using Your Amplifier'.



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## 4 Output Valves/2 Output Valves Toggle Switch

This switches between just two output valves to all four output valves.

*(Note – This also halves the impedance of the output transformer in the background when switched to ‘2 Output Valves’ so the speaker impedance is always as labeled at the speaker jack sockets.)*

Output Power Options:

- Half Power/2 Output Valves = 30 Watts.
- Full Power/2 Output Valves = 50 Watts.
- Half Power/4 Output Valves = 70 Watts.
- Full Power/4 Output Valves = 100 Watts.

## HT Fuse

1 x T1.6 Amp

*(Note – These will blow if any of the power amp/output stage valves short. This helps to protect the rest of the circuitry.)*

## Valves

Preamp and phase inverter: 5 x ECC83/12AX7 valves

Effects loop: 1 x ECC81/12AT7 valve

Power amp: 4 x EL34/6CA7 valves

Valve position diagram available at [www.orangeamps.com](http://www.orangeamps.com)



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## 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](http://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 [www.orangeamps.com](http://www.orangeamps.com)

