

Suncoast

CUSTOM AMPLIFICATION



CUSTOM 18 GUITAR AMPLIFIER OWNERS MANUAL

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1 Overview

- 1.1 Introduction
- 1.2 Features

2 Controls

- 2.1 Front Panel Layout
- 2.2 Preamp Controls
- 2.3 Rear Panel Layout
- 2.4 Rear Panel Jack Description

3 Operation

- 3.1 Operating Instructions
- 3.2 External Effects Patching
- 3.3 Amplifier tone settings

4 Technical

- 4.1 Specifications
- 4.2 Vacuum Tube Replacement
- 4.3 Tube Location Diagram

1.1 Introduction

Thank you for purchasing the SUNCOAST CUSTOM 18 guitar amplifier. It is our commitment to providing our customers with the highest quality, handcrafted musical instrument amplifiers, built in the USA. Utilizing our knowledge of classic designs from the past 50 years, we set out to recreate that unique sound of some of our personal favorite artists. The Custom 18 is a low wattage amp whose preamp design is based around the mid 70's Dumble Overdrive Special. These amps were hand made for artists like Carlos Santana and Walter Becker which gave them their distinctive tone. Some of the early amps used a pair of EL34 output tubes. Our custom 20W, wide-bandwidth output transformer coupled to matched pair of Mullard EL84's output tubes emulate the response of the original 50W Dumble amp. Similarly, internal trimpots adjust the Overdrive preamp's Bass, Midrange, Treble and Volume. Next, we re-designed the phase inverter circuit and presence control for a bold, aggressive British tone. The result is a clean, classic "Black Face Twin" tone with foot switchable Overdrive. Add in the dynamic, touch sensitive compression and presence of a vintage HIWATT and you have the Ultimate Tone amp at an 18W, club or studio volume level.

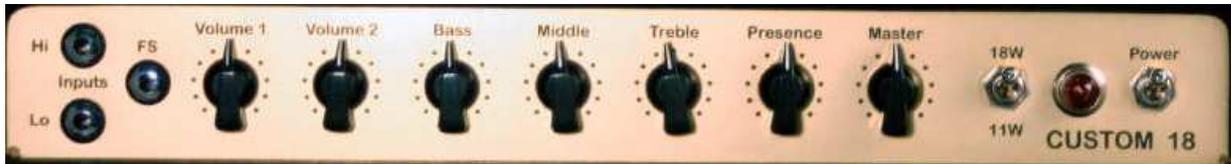
1.2 Features

The following is a summary of your Custom 18's unique features:

- Classic 70's Preamp design.
- Custom 18W, Dual EL84 Output design.
- Custom Output and Power transformers.
- Front panel 18W/11W switch for Class AB Push-Pull or Single-Ended Class A output.
- Rear panel Pentode/Triode switch for Output tube operating mode.
- Rear panel effects loop Send and Return jacks.
- Rear panel line level Preamp Output jack.
- Separate 4, 8, 16 ohm speaker output jacks.
- Rear panel Standby switch.

*Dumble and HIWATT are trademarks of their respective owners

2.1 Front Panel Layout



2.2 Preamp Controls

Hi & Lo Inputs - Hi and Lo gain instrument input jacks.

Footswitch Input – Footswitch input jack for Overdrive select.

Volume 1 – This control adjusts the volume of the clean preamp.

Volume 2 – This control adjusts the gain of the overdrive preamp.

Bass – This tone control adjusts the amount of low frequencies.

Middle - This tone control adjusts the amount of midrange frequencies.

Treble - This tone control adjusts the amount of high frequencies.

Presence - This tone control adjusts the amount of upper high frequencies.

Master - This control adjusts the output level of the power amplifier.

18W/11W Mode Switch – Selects Class AB Push-Pull or Single-Ended Class A output power.

Indicator Lamp – Lights up red when power is On.

Power Switch – Main On/Off Switch.

2.3 Rear Panel Layout



2.4 Rear Panel Jack Description

Power Input - Power line cord input jack.

Main Fuse - Main power fuse. Replace with only same type and rating.

B+ Fuse - High Voltage tube power supply fuse.

Standby Power Switch - Unit standby power switch. Allowing the unit to warm up for one minute before turning the standby switch On will extend tube life.

Pentode/Triode Mode Switch - Power tube output mode select switch. Use the Pentode mode for that classic British rock tone. Triode mode has a darker tone with less edge suitable for Jazz and Blues.

4 Ohm Speaker Output Jack – Use this jack for a 4 Ohm speaker load.

8 Ohm Speaker Output Jack - Use this jack for a 8 Ohm speaker load.

16 Ohm Speaker Output Jack - Use this jack for a 16 Ohm speaker load.

Preamp Output Jack - Line level output to PA or slave power amp. This output is a line level attenuated signal taken from the 8 ohm speaker output.

Effects Return Jack - Input from external effects unit. This input is a pre master volume line level input.

Effects Send Jack - Output to external effects unit. This output is a post preamp line level output.

3.1 Operating Instructions

- Always connect the loudspeaker to the correct speaker output jack impedance prior to turning the unit ON.
- Use only correct 2-conductor speaker wire (16 gauge or greater) with mono ¼” ends. The use of coaxial instrument cable (guitar cord) for connecting speakers will invalidate your warranty and may damage your amplifier.
- Always connect the unit to the proper power source and use a grounded outlet, otherwise a shock hazard may result, especially when the unit is connected to other equipment. Domestic units should be connected to 115VAC, 60 Hz. Connection to improper line voltage will cause permanent damage.
- Do not expose this unit to rain or excessive moisture. This may cause a shock hazard or damage to the unit.
- Do not block the ventilation grilles on the rear panel of the amplifier head or top panel of the combo amp.
- Do not touch the output tubes while the unit is ON, severe burns can occur.

CAUTION: Use only one speaker output jack at a time. Using more than one jack at a time will overheat your output transformer.

WARNING: You MUST have a speaker load connected to this amp at all times. Operating the Custom 18 with no load will burn out your output tubes and could destroy the output transformer. This will void your warranty!

SAFETY NOTICE: Do not open the unit. There are no user serviceable parts inside the unit. Refer servicing to qualified personnel only. Extremely high voltages are present inside this unit that may result in severe injury or death.

3.2 External Effects Patching

Here is a list of effects in their respective order that can be used to achieve the Ultimate Tone. The rest of the magic is in your hands:

Guitar
|
Fuzz
Overdrive/Sustainer
Phase Shifter
Flanger
Tube Driver
Wah
Compressor
Chorus
|
Amplifier (HI Input)

Amplifier (Effects Send)
|
Volume Pedal
Digital Delay
Reverb/Echo
Noise Gate/Line Driver
|
Amplifier (Effects Return)

3.3 Amplifier Tone Settings

These settings are merely a suggested starting point from which you can set to your own personal taste.

Volume 1 - 4
Volume 2 - 6
Bass – 2
Middle – 4
Treble – 7
Presence – 7
Master – 5 (adjust for desired loudness)

4.1 Specifications

Input Line Voltage – 120VAC, 60Hz

Power Consumption – 55W

Line Fuse Rating – 1A, Time Lag

B+ Fuse Rating – 1/4A, Time Lag

Output Power – 18W RMS

Output Impedance – 4, 8, 16 Ohms

Tube Types: V1, V2, V4 – 12AX7 (ECC83)

V3 – 12AT7 (ECC81)

V5, V6 – 6BQ5 (EL84)

Dimensions: Amp Head – 20”W x 8.25”H x 8.25”D

Combo 1x12” – 24”W x 19.875”H x 9.5”D

Combo 2x12” – 28”W x 19.875”H x 10.5”D

Weight: Amp Head – 17lbs

Combo 1x12” – 35lbs

Combo 2x12” – 39lbs

4.2 Vacuum Tube Replacement

Generally speaking, tubes last a very long time. Output tubes should last for approximately 2000 hours or one year of daily use. Preamp tubes can last upwards of 15-30 years and do not need to be replaced unless they become noisy with popping or microphonic squeals through your speakers. Your amp comes stock with JJ - 12AX7 preamp tubes and a matched pair of Mullard EL84 output tubes. The phase inverter tube (V3) is a JJ - 12AT7, low gain tube. Using a different type of tube other than a 12AT7 for V3 can result in high frequency oscillations. We do not recommend any substitutes. **ALWAYS** disconnect the power to the unit and let the tubes cool before replacement.

4.3 Tube Location Diagram

