

## AMPLIFICATION

# Tasty 21 OD



## **User Manual**



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## "Tasty 21 OD"

#### in

## **Connected Combo Design®**

## User Manual & Technical Information

#### Version 0.2/2022

## Foreword

Thank you for choosing the **Tasty 21** from **TR5HR AMPLIFICATION**. You now own a 21-watt all-tube amplifier in the "Connected Combo Design" of the highest quality. This is a fully hand-built and wired amplifier (handwired – point to point) with an Overdrive Channel and its corresponding Connected Combo Box. The **Tasty 21** was developed and built by people who, as musicians themselves, take guitar sound and quality very seriously. Therefore, this product has been designed and manufactured with high-quality components and great care to meet all your professional demands. Our goal was to create an amplifier that not only sounds fantastic and is easy to use but is also built to provide you with years of reliable service.

Please take a moment before first using the **Tasty 21** to carefully read this user manual, register online on our website, and complete the warranty form.

Thank you again, and now enjoy your new Tasty 21!

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## 1. Warnings

#### 1.1 Warnings and Safety Regulations

For product liability reasons, we are required to clearly highlight certain safety aspects, which must not be overlooked under any circumstances. With all due respect, we ask you to carefully follow the checklist listed below. The device must not be stored or operated in a damp or wet environment. Before connecting to the mains, ensure that the voltage of the device matches the voltage specifications of the local power supplier. If the specifications of the power supplier do not match the voltage indicated on the back of the amplifier, the device must never be connected to the mains. The device should only be opened by qualified personnel. Inside the amplifier, there are hazardous voltages that can remain stored even after the device is turned off. Additionally, there are no components inside the amplifier that can be replaced or serviced by the user. The device is for amplifying a guitar signal and should only be used for this purpose. Operating the amplifier without a connected load (speaker box) is not permitted. The amplifier is a tube amplifier. The electron tubes used are sensitive to strong vibrations, especially when heated (up to 30 minutes after the device is turned off). To prevent damage, transport and setup should be handled carefully. Strong temperature fluctuations should be avoided. Especially, moving the device from a cold transport vehicle to a warm stage can cause condensing moisture, leading to potential damage. Typically, 60 minutes of acclimatization is sufficient. The amplifier should be transported in a robust case and kept in an upright position, avoiding any sideways or upside-down positions. For health reasons, we warn against prolonged exposure to high sound levels, as this could lead to significant and irreversible hearing damage (including long-term effects). Defective fuses must only be replaced with equivalent fuses. The values specified on the back of the device must not be exceeded or fallen short of, as this could even cause the device to be destroyed. Only use the provided power cable or an equivalent three-wire power cable with a protective contact for the mains connection.

## 2. The Top Unit

#### 2.1 Connecting to the Connected-Combo-Box

The **Tasty 21** Top Unit is designed to be securely and stably connected to the accompanying Connected Combo Box. Once the top unit is connected to the box, the "Combo" can easily be transported using the carrying handle of the top unit. The **Tasty 21** can also be operated with any other standard guitar cabinet that has the appropriate power and impedance. See section 3.2.

#### 3. The Connected-Combo-Box

#### 3.1 Connected Combo Design®

The Combo Box is specially designed for the **Tasty 21** ("**Connected Combo Design**®"). The top unit is inserted into the designated opening above the box until the rubber feet of the **Tasty 21** click into the corresponding holes. The top unit is then fixed with the central screw, which is located inside the box, behind the upper, foldable rear panel. The central screw should be tightened by hand to ensure the **Tasty 21** stands securely in place. The **central screw** is secured against overtightening. Once the top unit is fixed, it is automatically connected to the speaker, as the contacts are now closed. See section 5.2.4. The concept of the "**Connected Combo Design**®" is to leave the Combo Box in the rehearsal room and take the top unit (and possibly floor effects) home, where it can be used with a second guitar box with appropriate power and impedance. This design allows for easy transport with minimal weight and space requirements.

#### 3.2 Speaker

The Combo Box is equipped with a 100-watt 12" speaker with 8 ohms impedance. This speaker, specifically matched to the **Tasty 21**, is extremely lightweight and has a high efficiency to achieve the best possible sound performance for the amplifier. Naturally, other standard guitar cabinets can also be used with the **Tasty 21**, provided the power (min. 25 watts) and impedance (8 ohms) match the specifications.

An option for a 50-watt speaker with a ceramic magnet is also available, which will make the Combo Box slightly heavier.

## 4. Commissioning

4.1 Power Connection, Combi Power Switch (Off-Std.By-On)

4.1.1 Power Connection / Mains

Before connecting to the power supply, ensure that the Combi Power Switch "Off-Std.By-On" is set to the "Off" position (tilted downward) and that the operator's mains voltage matches. The device is approved exclusively for operation at 115V (US) – 230V (EU)

4.1.2 Combi Power Switch (Off-Std.By-On), Stand-By (warm up) For the tube warm-up phase, first set the Combi Power Switch to the "Std.By" position (middle position). After approximately 2 minutes, the tubes will have reached the required minimum temperature. The **Tasty 21** is now ready for operation, and the switch can be moved from "Std.By"to"On."

Activating the amplifier too early may significantly reduce the lifespan of its components!

#### 4.1.3 Tube Protection

Tubes are components that operate with vacuum and high temperatures. Inside each tube are heating filaments (similar to a light bulb) that heat the internal plates. Switching from "Std.By" too early during warm-up occurs while the plates are still heating up. The plates have not yet been evenly heated, and the tube's so-called operating point has not been reached. This situation places unnecessary strain on the tubes and some neighboring components, leading to premature wear.

#### 4.1.4 Optimal Operating Temperature

It takes some time for all components, especially the power components, to reach their optimal operating temperature. A trained ear will notice a slight improvement in sound quality as the amplifier operates for an extended period.

## 5. Connedtions and Fuses

## 5.1 Front Panel



Combi Power Switch (Off-Std.By-On), Poweramp-Switch (21W/12W) Low, Mid, High, Hi-Cut, Volume, Boost-Switch, Input Jack

#### 5.1.1 Signal Input Jack

A guitar is connected to the input jack using a standard 6.3 mm jack plug and guitar cable. The quality of the cable and connection can significantly affect the amplifier's sound quality at this critical point.

#### 5.2 Rear Panel



Main Connector with Main Fuse, HT Fuse Speakerjack, Presence, Heads & Tales Switch Reverb-System (Mix & Dwell, Bypass Switch)

#### 5.2.1 Main Socket

For connecting the included power cable.

#### 5.2.2 Fuses

The Tasty 21 contains two fuses that are externally accessible:

- Main Fuse (power supply)
- HT Fuse (high voltage for tubes) Fuse specifications are printed below the fuse caps.

## 5.2.3 FX - Loop

The FX loop system provides a serial path (Send and Return) with no sound degradation, allowing effects devices to be integrated into the amplifier's signal path. It supports both pedal and 19-inch rack effects. Connect the Send output to the input of the effects device. Ensure proper levels on the effects device. The processed signal returns via the output of the effects device to the Return input.

The FX loop also includes a "Bypass Switch" to remove the loop from the signal path.

We recommend using spatial effects (reverb, delay) with the FX loop, as processing the preamp signal directly through these effects yields superior sound quality.

Other effects pedals can be placed before the Tasty 21's input.

#### 5.2.4 Speaker-Connedtion / Wireless Integration

The **Tasty 21** features a speaker output with 8-ohm impedance, suitable only for external cabinets of the same impedance.

# For use with the Tasty 21 Connected Combo Box, <u>no</u> speaker cable is required!

Securing the **Tasty 21** head to the Combo Box via the **central screw** automatically establishes the speaker connection.

When using the **Tasty 21** speaker output while connecting the combo box, the combo box speaker will automatically switch off to avoid mismatch.

#### WARNING:

Never loosen the central screw during operation, as it interrupts the speaker connection, potentially causing severe damage to the device!

The amplifier must not be operated without a speaker or equivalent load.!

## 6. Controls

6.1 Power / Stand-By Schalter

The Combi Power Switch (Off-Std.By-On) is used to operate the device. See section 4 for detailed instructions.

6.2. The Overdrive-Channel

The overdrive channel of the Tasty 21 is designed with a modern base sound. It is dynamic and responsive, reacting excellently to pick attacks and guitar volume. With just one channel, sounds ranging from clean to overdrive are possible.

#### 6.3 Heads & Tales, Boost Switches

The "Heads & Tales" switch sets the gain of the preamp. In the "Tales" mode, the **Tasty 21** provides a low gain for light to medium overdrive, suitable for moderate clean and crunch sounds. In the "Heads" mode, the gain increases, providing medium to heavy overdrive, with a quicker and more dynamic response, ideal for lead sounds. Additionally, the **Tasty 21** has a Boost Switch that allows extra gain. This results in stronger compression; care should be taken with settings to achieve the optimal sound.

#### 6.4. Tasty Power Level

The **Tasty Power Level** allows the guitarist to reduce the volume to "room level." It remains tonally neutral until the lowest setting. Prolonged use at the minimal setting may cause the knob to become quite warm, as the power is converted into heat. This is normal and not harmful, as the Tasty Power Level is designed for a maximum power output of 100W.

### 7. The Preamp of the Tasty 21

#### 7.1 Preamp Function

The amplifier features a preamp that enables the user to create all possible variations of overdrive sounds. The tone controls are highly effective, so even small adjustments can make a noticeable difference.

#### 7.2 Preamp Tubes

- Overdrive Channel: V1 & V2 = 12AX7 specially selected
- Driver Tube: V3 = 12AX7 balanced and specially selected

The preamp tubes are specially matched to the **Tasty 21** and should only be replaced with identical types to maintain optimal sound quality. These tubes are not used as power components and therefore age more slowly than the power tubes.

#### 7.3 Microphony and Noise

Mechanical interference can cause tube microphony (high-pitched ringing). Check the input tube first if this occurs. Tubes may also cause humming or other noise issues

## 8. The Power Amp of the Tasty 21

#### 8.1 Power Tubes

The power amp tubes are specially selected and matched for the Tasty

**21**. A pair of EL84 Premium tubes are used, which provide a balanced tone and enough headroom. The **Tasty 21** delivers approximately 21 watts of output.

Additionally, the **Tasty 21** offers a power reduction feature to about 12 watts (Pentode / Triode switching).

### 8.2.1 Age-Related Defects in Power Tubes

The power tubes in the amp are subject to aging. If one tube fails due to age, it's often a good idea to replace both power tubes, as one defect often leads to the failure of the other in the near future. Typically, after 2 to 4 years of use, the entire pair should be replaced. The aging process primarily affects the emission layer inside the tube. The more power a tube has to deliver, the faster this layer wears out.

### 8.2.2 Selection of Tube Types

We use the most reliable tubes from current production. We always strive to use the best quality in our Tasty 21. As such, the type and manufacturer of the tubes may change. We offer a 3-month warranty only for the factory-installed tubes.

#### 8.3 Bias Adjustment

Bias adjustment must be performed by qualified personnel only.

## 9. Cleaning and Maintenance

#### 9.1 Cleaning

Do not use wet cleaning materials. Clean the exterior with a slightly damp cloth.

#### 9.2 Maintenance

During operation, ensure adequate ventilation; no object should block the airflow in or around the **Tasty 21**.

#### 9.3 Tube Replacement

Only qualified personnel should replace power tubes.

## **10.Technical Specifications**

#### Main Power

115Volt / 60Hz (US-only) - 230Volt / 50Hz (EU)

#### Fuses:

- Main Fuse: 2A (US) 1A (EU)
- HT Fuse: 0.25A

#### Tubes:

- V1, V2: 12AX7, special selected
- V3: 12AX7, balanced special selected
- V4, V5: EL84 Premium matched pair

Output Power: ~21W (Pentode), ~12W (Triode) at 8 Ohms

#### Power Consumption:

- ~100W at 115V, 60Hz (US)
- ~50W at 230V, 50Hz (EU)

#### Dimensions:

- Head: H=190mm / W=320mm / D=218mm
- Combo Box: H=450mm / W=460mm / D=220mm

#### Weight:

- Head: 6.0 kg
- Combo Box (60W Neodymium speaker): 8.0 kg
- Combo Box (25W Ceramic speaker): 10.2 kg

#### WARNING:

#### No user-serviceable parts inside!

Contact qualified personnel for service.

Design and utility patents protected.

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