

# HIWATT

## Welcome to Hiwatt.

Proudly producing generations of iconic British tone for the World's best artists. Legendary headroom, clean and clear sounds, great for pedals and studio work, unbeatable live onstage.

### CUSTOM 20

Hiwatt SA20



### STUDIO STAGE

Custom Hiwatt SS20/40



## IMPORTANT SAFETY INSTRUCTIONS

### Please read these instructions carefully before switching your amplifier on.

Please ensure that the voltage selector/indicator and fuses match the supply voltage of the country in which the amplifier is being used.

Do not switch the amplifier on without the loudspeaker connected. It is important that the amplifier and speaker are matched at the correct impedance. Failure to do so can result in damage to the amplifier and speaker.

Never attempt to by-pass fuses or fit fuses of incorrect value.

Never attempt to use an amplifier in wet or damp conditions.

Protect the power cord from being walked on or pinched. Do not modify.

All servicing should be carried out by a professionally qualified service technician.

Always ensure free movement of air around the amplifier to prevent overheating.

Do not attempt to remove the amplifier chassis, there are no user serviceable parts inside.

Always use the mains lead that is provided with your amplifier. If a replacement is needed, please contact your Hiwatt Dealer.

Always unplug the amplifier during lightning storms and when unused for prolonged periods of time.

**WARNING – if used improperly or without proper safeguards this equipment can cause hearing damage or loss of hearing.**

**Servicing is required** when the apparatus has been damaged in any way, such as when the power supply or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, or when the apparatus does not operate normally or has been dropped.



[Britampco.co.uk/downloads](http://Britampco.co.uk/downloads)

IMPORTANT SAFETY INSTRUCTIONS  
IMPORTANTI ISTRUZIONI DI SICUREZZA  
CONSIGNES DE SÉCURITÉ IMPORTANTES

**Follow all instructions and warnings**

Please keep instructions in a safe place

Register product online: **Britampco.co.uk**



# HIWATT UK CUSTOM SHOP MANUAL

**Welcome to Hiwatt Custom Shop** - Proud builders of the world's greatest hand wired valve amplifiers and historic loudspeaker enclosures from 1966 to present. Still situated in Historic South Yorkshire England, Hiwatt continues to build on Dave Reeves original amplifier circuit using traditional methods, vintage correct layouts and the best components and materials. Our goal is to produce amplifiers produce the same sound as the late 60's and early 70's when Hiwatt exploded onto the British scene in London, England. Hiwatt has carved out its place in tonal history with legendary headroom and crystal clear tones with rich harmonics. Rugged enough for use on the biggest stages and immortalized on some of the world's greatest albums, Hiwatt is chosen time and again for crisp and clear tones.

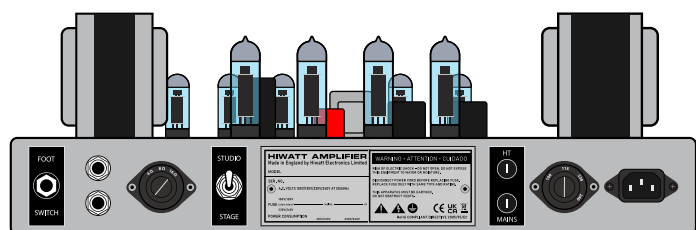
Please read this manual in its entirety before using your amplifier to ensure you get the most out of your Hiwatt product in the safest manner possible. This is a professional quality guitar and instrument amplifier ( the AP stamped on the serial plate stands for 'all purpose' ) - built to last a lifetime of playing both on and off the road when used responsibly and kept properly serviced. **Please register your product with us online at [Hiwatt.co.uk](http://Hiwatt.co.uk) and keep this manual in a safe place for future reference.**



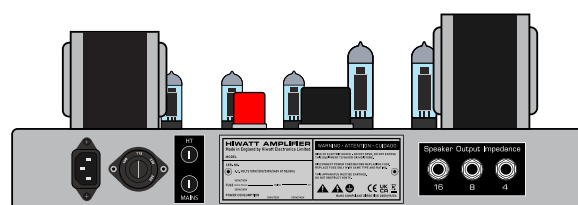
SS20/40 Front



SA20 Front



SS20/40 Back Panel

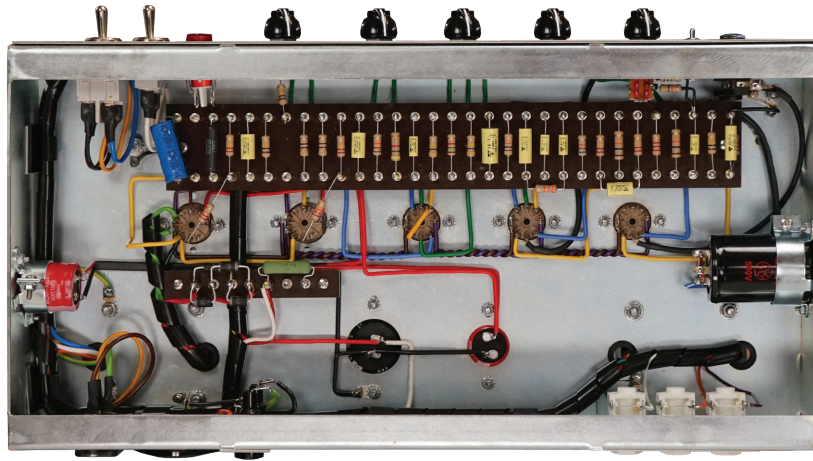


SA20 Back Panel

	SS20/40	SA20
Type	All Purpose Guitar/Bass/Instrument	All Purpose Guitar/Bass/Instrument
Cabinet	18mm Baltic Birch ply head box	18mm Baltic Birch ply head box
Voltage	Switchable voltage (100v, 115v, 230, 240v)	Switchable voltage (100v, 115v, 230, 240v)
Impedance	Switchable impedance (4Ω, 8Ω, 16Ω)	Selectable impedance (4Ω, 8Ω, 16Ω)
Preamp Valves	3x ECC83 (12AX7), 1x ECC81 (12AT7)	3x ECC83 (12AX7)
Output Valves	4x EL84	2x EL84
Speaker Outputs	2x 1/4" parallel speaker jacks	3x 1/4" speaker jacks (4Ω, 8Ω, 16Ω)
Power Output	Switchable 20/40 Watts	20 Watts
Dimensions	Height: 255mm (~11") Width: 630mm (~25") Depth: 280mm (~12")	Height: 210mm (~9") Width: 497mm (~20") Depth: 250mm (~10")
Weight	16.1 Kg (~36 lbs)	11 Kg (~25 lbs)



## The Hiwatt Custom 20

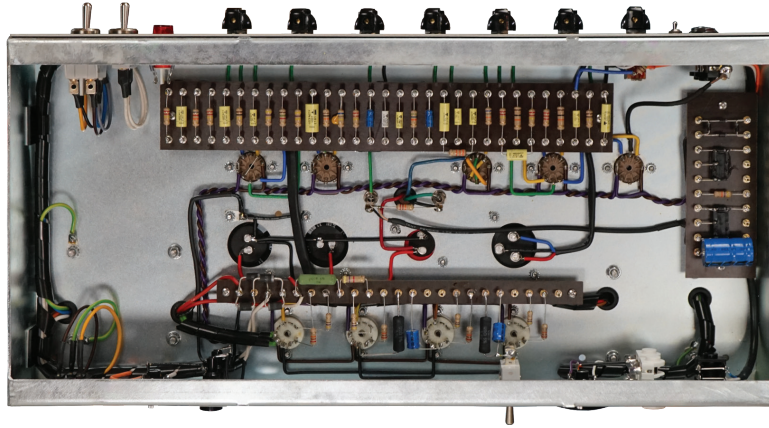


The **Hiwatt Custom 20** circuit was originally developed in the early 80's. It became **Hiwatt's unique 'EL84' powered circuit**. The EL84 (AX7 in North America) produced less wattage allowing the amp's signal to distort/ breakup sooner than the more powerful EL34 tube found in the **Classic Hiwatt 'DR'** series amplifiers. This amp is still capable of **Hiwatt 'clean tone'** but has **beautiful breakup on the edge of distortion**, perfect for the studio or small venue use at significantly reduced volumes. The **Hiwatt Custom 20** is paired with the Fane F25 to accentuate the breakup at lower volumes - **'creating a Hiwatt like no other'** - touch sensitive and dynamic, **Classic British mid-focused tone** - able to swing from sparkling clean to an overdriven crescendo with a gentle or more aggressive attack. For such a serious piece of equipment, this Hiwatt is a whole lotta fun to play.

**Note:** today's **Hiwatt Custom 20** has added features - a more dynamic tone stack, a true transparent **Boost** (filter cap bypasses the pot allowing full frequencies through) and a **Bright Switch** - these features are able to be switched out of the signal path returning this **Hiwatt to it's original configuration**.



## The Custom Hiwatt 20/40 'Studio Stage'



The **Custom Hiwatt 20/40** aka '**The Studio Stage**' utilizes the same circuit as the **Hiwatt Custom 20** but with a different intention. The **40 watt 'Stage' mode** of this amp is again very dynamic and touch sensitive but with twice the valve power and a Classically oversized **Hiwatt** output transformer. This amp has more **Hiwatt clean headroom** and also is able to overdrive the valves (tubes) into territory not often associated with early **Hiwatt** amplifiers. In **20 watt 'Studio mode'** - 2 of the 4 power tubes are not used creating a significantly oversized output transformer and unique tones result - tone that cannot normally be achieved on a 20 watt amplifier (often used by today's Artists onstage as well).

Often referred to as **Hiwatt's** most versatile amplifier the **Custom Hiwatt 20/40** also is the only **Custom Shop** amplifier to have **real Spring Reverb**. Recently we have retooled the mixing of the Dry/Wet Signal of the reverb and added a **Dwell pot** for even greater control as well as the ability to turn **on/off with a footswitch**. The '**Studio Stage**' always had a '**push-pull Boost**' on the gain pot - now it is conveniently **footswitchable**. Also a '**bright switch**' can be **turned on or off** for added versatility depending on the pickups or guitar used.

**Hiwatt** has significantly made the Player/Artists ability to interact with their tone (on stage and in studio) easier and quicker to implement - we look forward to seeing the **Custom Hiwatt Studio Stage** in the hands of the next generation of Artists and Producers.

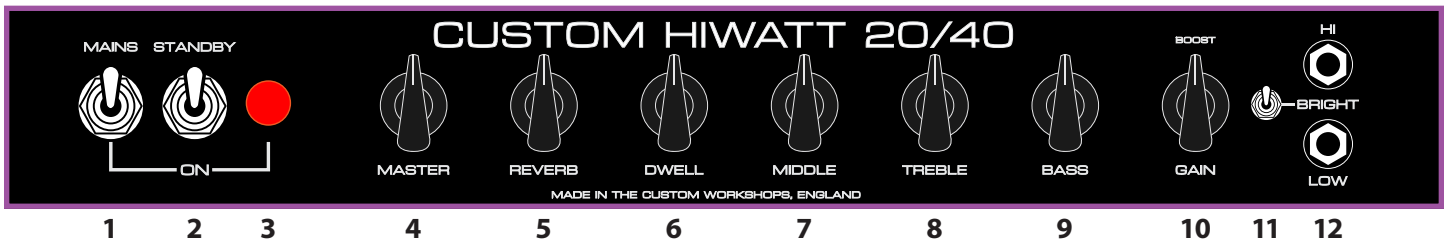




# Front Panel Features

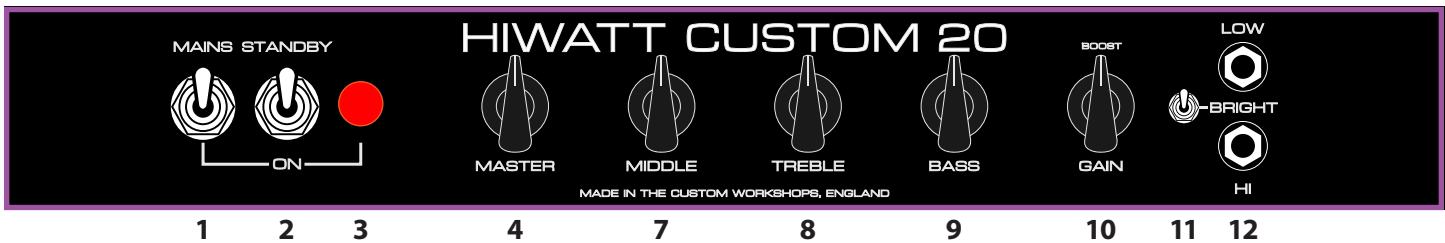
## Studio Stage Front Panel

NEW 2025 FEATURES



## Custom 20 Front Panel

NEW 2025 FEATURES



**1. Mains On/Off** - Turns the amplifier on and off.

**2. Standby Switch** - The standby switch allows the valves to heat to the optimum working temperature. Leave this switched off when turning the Mains on and allow 2-3 minutes before turning standby on. Place amp in Standby mode when switching the impedance of the amplifier.

**3. Mains Lamp** - This LED will light up when the power is on

**4. Master** - Controls the overall volume of the amplifier.



**5. Reverb (Custom 20/40)** - Turning this control clockwise adds reverb and turning it counterclockwise reduces reverb.

**6. Dwell (Custom 20/40)** - This control sets the decay time of the reverb effect.

**7. Middle** - This control is used to set the amount of Middle frequency. Turn the control clockwise for more mids and counterclockwise for less mids.

**8. Treble** - This control is used to set the amount of Treble. Turn the control clockwise for more treble and counterclockwise for less treble.

**9. Bass** - This control is used to set the amount of bass. Turn the control clockwise for more bass and counterclockwise for less bass. A Hiwatt amplifier is capable of a very full sound and will remain tight and sound full even at high volumes.

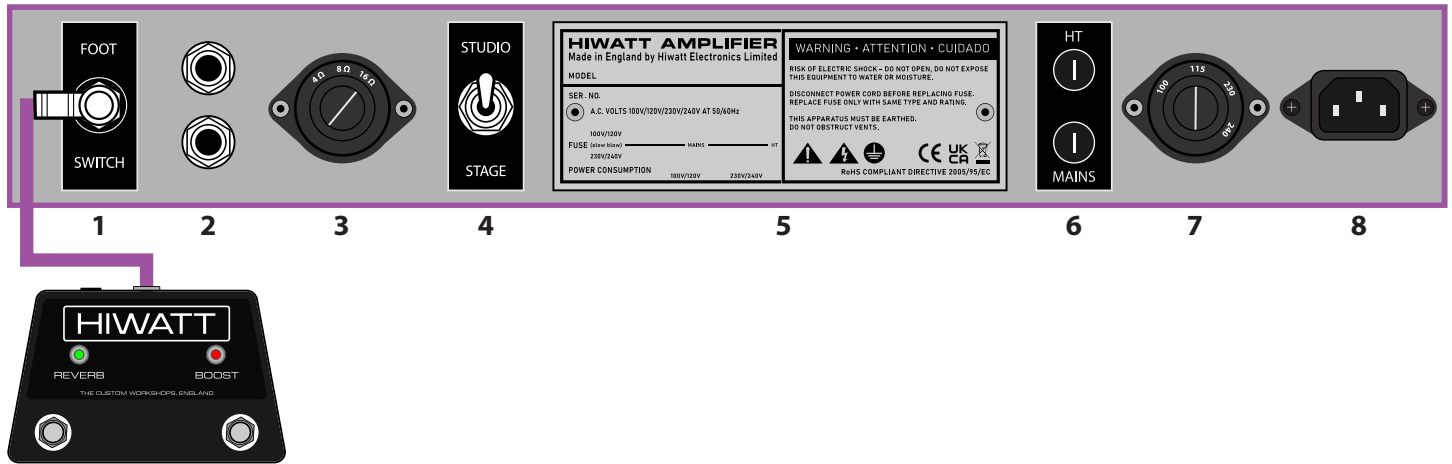
**10. Gain** - Controls the Gain of Channel 1. This is a push/pull pot that can be pulled out for a preamp boost.

**11. Bright Switch** - This control toggles a bright cap on the volume pot. When turned on (upwards position) this bright cap helps achieve the sound of the original JCM/PMV800. The switch can be turned off to reduce brightness for more tonal options and pickup configurations.

**12. Input** - Plug your guitar in here with a 1/4" instrument cable.

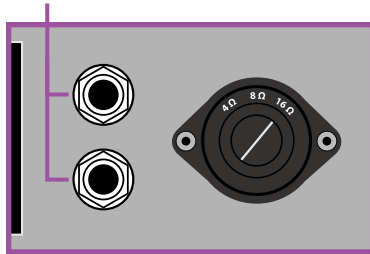
# Rear Panel Features

## Studio Stage Rear Panel



**1. Footswitch** - Connect the included footswitch (FS-201-SS) using a 1/4" TRS cable. The footswitch is used to toggle the amplifier's gain boost and reverb effect on and off.

Parallel



**2. Speaker Jacks** - Connect your amplifier to your speaker cabinet(s) using a 1/4" speaker cable. There are two parallel speaker jacks for convenience in setting up your amplifier with multiple speaker cabinets.

**3. Impedance Switch** - (Custom 20/40) The impedance selector switch allows you to set your amplifier to 4, 8 or 16 ohms. Set this switch correctly depending on your speaker cabinet(s) impedance.

**4. Studio/Stage Switch** - This switch allows you to toggle between two power options, 'Studio' and 'Stage'. Studio mode delivers 20 Watts of power and is ideal for a studio setting or smaller venues that require less stage volume. Stage mode delivers 40 Watts of power and is perfect for big stages. Please ensure that the amplifier is in standby before switching the wattage of your amplifier.

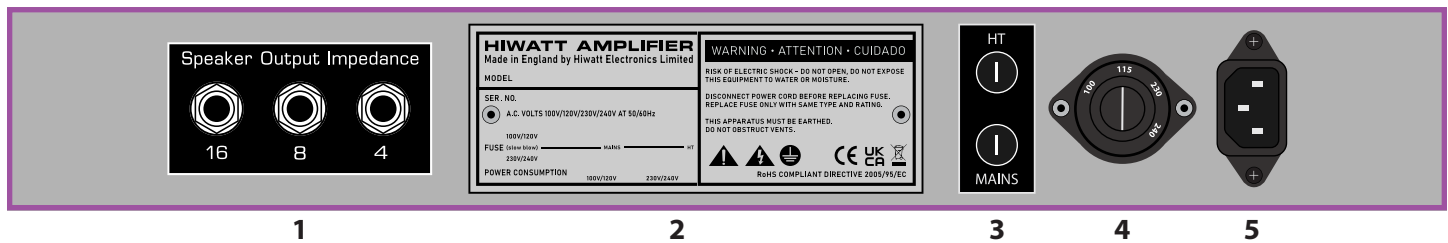
**5. Serial Plate** - This is where you will find the model and serial numbers of your amplifier as well as some technical info. Use this information to register this amplifier at [hiwatt.co.uk](http://hiwatt.co.uk).

**6. Fuses** - This amplifier includes two fuses to protect the amplifier. The HT fuse (with a value of 500mA) and the Mains Fuse. One or both fuses will "blow" if there is something wrong inside or outside the amplifier. If a fuse ever blows, please take the amplifier to a qualified amplifier technician for service.

**7. Impedance Switch** - The impedance selector switch allows you to set the amp to 4, 8 or 16 ohms. Set this switch correctly depending on your speaker cabinet(s) impedance. Setting this switch incorrectly can cause damage to the amp and void your warranty! There is more information on how to set impedance in the following section.

**8. IEC Mains Socket:** As with all equipment that uses wall voltage to operate, plug your mains lead from this IEC socket to the mains socket in order to power up the amp.

## Custom 20 Rear Panel



**1. Speaker Jacks** - Connect your amplifier to your speaker cabinet using a 1/4" speaker cable. Unlike the Studio Stage, the Custom 20 features 3 speaker outputs each with different impedances: 16, 8, and 4 ohms. Ensure only one speaker output is used at a time.

**2. Serial Plate** - This is where you will find the model and serial numbers of your amplifier as well as some technical info. Be sure to register this amplifier at [hiwatt.co.uk](http://hiwatt.co.uk).

**3. Fuses** - This amplifier includes two fuses to protect the amplifier, the HT fuse (with a value of 500mA) and the Mains Fuse. One or both fuses will "blow" if there is something wrong inside or outside the amplifier. If a fuse ever blows, please take the amplifier to a qualified amplifier technician for service.

**4. Fuses** - This amplifier includes two fuses to protect the amplifier, the HT fuse (with a value of 500mA) and the Mains Fuse. One or both fuses will "blow" if there is something wrong inside or outside the amplifier. If a fuse ever blows, please take the amplifier to a qualified amplifier technician for service.

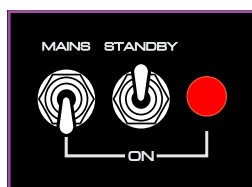
**5. IEC Mains Socket:** As with all equipment that uses wall voltage to operate, plug your mains lead from this IEC socket to the mains socket in order to power up the amp.

### BEFORE TURNING YOUR CUSTOM HIWATT AMPLIFIER ON

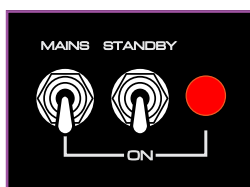
1. Please read the manual in its entirety first.
2. Ensure that the voltage selector matches the voltage of the country you are playing in.
3. Ensure that the fuses are correct for the voltage selected.
4. Ensure that the speaker cabinet you are connected to matches the impedance set on the impedance selector. **Note: Tube amps require a speaker load or equivalent to avoid damage to the amp.**
5. Always set the master volume fully counterclockwise when turning the amplifier on and off. Carefully increase the volume to the desired level after the amplifier's tubes are warmed up.

### TURNING THE AMPLIFIER ON

Wait a minimum of 60 seconds to let the valves warm up to the optimal temperature, then flip the Standby switch to the down position (disengaged). This will ensure longer valve life for your amplifier.



Standby Mode Engaged



Standby Mode Disengaged

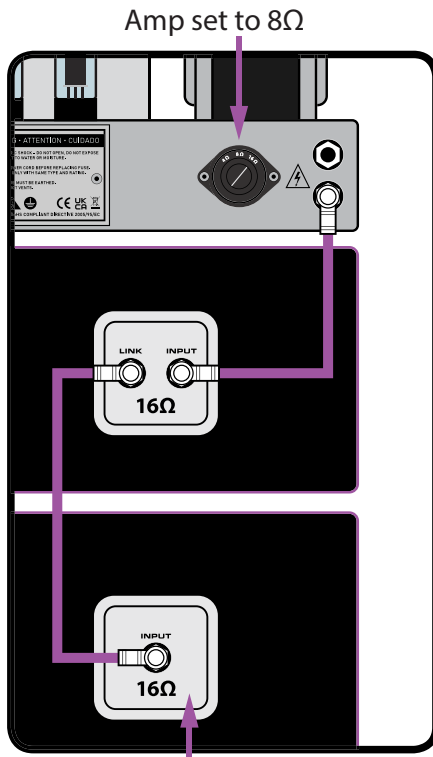
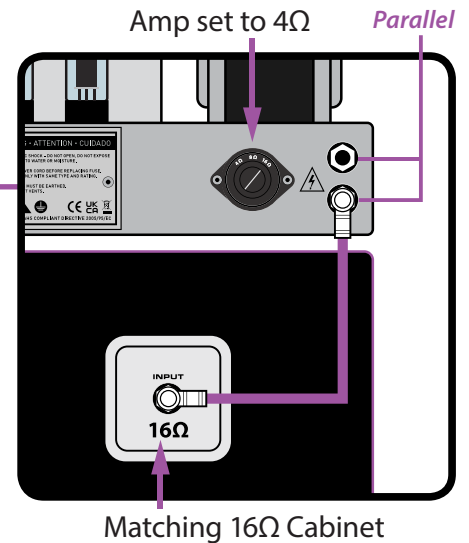
Leave the standby switch in the up position and turn on the amplifier by flipping the Mains switch into the down position. The amp is now in 'Standby Mode'. The Mains Lamp should light up, indicating that the amplifier is now on.



## Connecting Your Amplifier to A Single Cabinet

**IMPORTANT:** Always match the impedance of your amplifier with the total impedance of the speaker cabinet(s)

- Make the connection with a good quality 1/4" unshielded speaker cable. **Never use an instrument cable.**
- Connect one of the amplifier outputs to the correct input of the speaker cabinet.



Two 16Ω cabinets linked in parallel is 8Ω

## Connecting Your Amplifier to Two Cabinets in Parallel

*(If speaker cabinet has a parallel link output)*

**IMPORTANT:** Always match the impedance of your amplifier with the total impedance of the speaker cabinet(s)

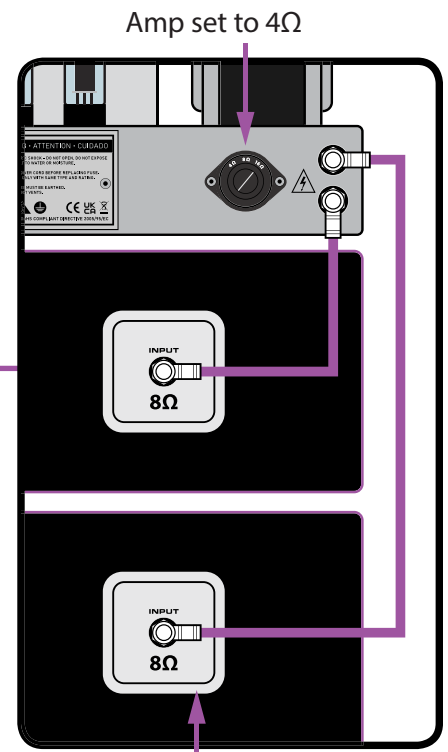
- Both connections are made with a 1/4" unshielded speaker cable.
- Connect one of the amplifier outputs to the correct input of the speaker cabinet.
- Many speaker cabinets come with a convenient 'parallel link' output for connecting an addition cabinet in parallel. The second cabinet is connected by running an additional speaker cable from the parallel link output on the first cabinet into the input of the second cabinet.

## Connecting Your Amplifier to Two Cabinets in Parallel

*(If speaker cabinet does not have a parallel link output)*

**IMPORTANT:** Always match the impedance of your amplifier with the total impedance of the speaker cabinet(s)

- Both connections are made with a 1/4" unshielded speaker cable.
- Connect one of the amplifier outputs to the correct input of the first speaker cabinet.
- Connect the remaining speaker output to the correct input of the second speaker cabinet.



Two 8Ω cabinets linked in parallel is 4Ω

# Hiwatt Signature Presets

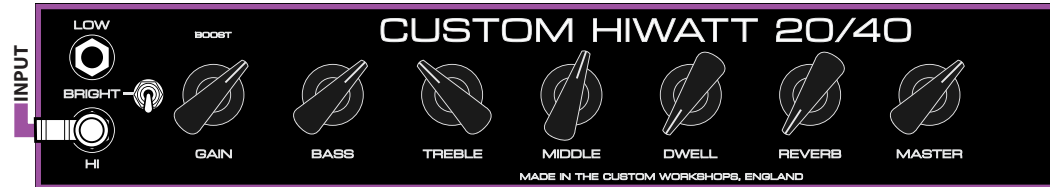
## Mr. Brightside

Achieve the legendary sound of The Killers. This preset showcases the bright, crystal clear cleans that Hiwatt is known for.



## Light Overdrive

A fantastic blend of Hiwatt cleans with a pinch of saturation. Dial in the gain and master volume for just the right amount of grit.



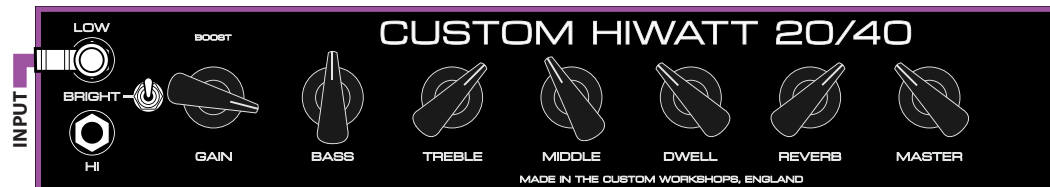
## Heavy Distortion

Love amp distortion? The Studio Stage delivers plenty of punch when the gain control is cranked and the boost is engaged.



## Lush Reverb

Take full advantage of the Studio Stage's true spring reverb. Thanks to the new dwell control, you can easily dial in the perfect decay time.



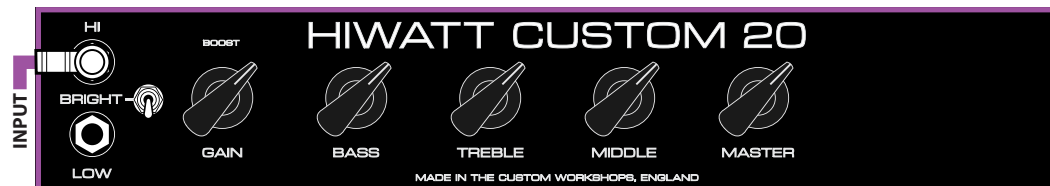
## Pushed Cleans

This preset showcases the crystal clear cleans and Hiwatt headroom of the Custom 20. Turn up that master control for even more.



## Light Overdrive

A smooth overdriven tone that shines on its own and can also add some extra saturation to your favourite dirt pedals.



## Scooped Distortion

Discover how powerful a 20 watt Hiwatt amplifier can sound with this preset. Nothing but beefy distorted goodness.



# HIWATT



## BRITISH ENGINEERING

- Hiwatt amplifiers are warranted against defects in materials and workmanship for a period of 1 year.
- Speakers, transformers, reverb tank, batteries, and tubes/valves are warranted for 90 days.
- Please note: It is your responsibility to use your equipment safely and properly, without modifications, and within specifications and with a safe power supply.
- Please note: The limited Warranty provided is non-transferable. (please register your product online and retain sales receipt and original packaging) and authorization needs to be obtained by Hiwatt Electronics (Hiwatt.co.uk) before any service work is completed by a professionally qualified Service Technician.
- Shipping costs incurred obtaining warranty service are the responsibility of the purchaser, the purchaser must obtain permission to ship any/all products prior to shipping.
- Please note: Any damages incurred in shipping must be reported to the shipper and Hiwatt Electronics immediately upon receiving the product.

**Follow all instructions and warnings**

Please keep instructions in a safe place

Register product online. **Hiwatt.co.uk**

Serial Number:

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Date of Purchase:

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Store Contact Info:

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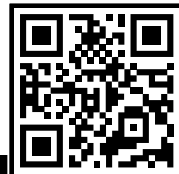
RECYCLING INFO



**Hiwatt Electronics Limited**

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**SALES@HIWATT.CO.UK**



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