HELIOS USER MANUAL

Please read safety instructions before operating this amplifier!

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1. Features:

- Point to point hardwired two channel all tube design
- Plexi and Hot gain input
- Ch1: volume control and 3 position bright switch
- Ch2: gain, bass, middle, treble and volume control
- Pre EQ switch for plexi bright, normal and bright
- 70's or 80's voicing switch
- EQ bypass switch for raw pre- power amp voicing
- Common presence control
- Bottom control with punch switch for low end response
- Tube buffered series fx loop with return level control
- JMP-100W or JTM-30W mode switch (100W model only)
- channel select and fx loop footswitch connector
- 100 or 50 watt EL34 power amp

DIMENSIONS and WEIGHTS: Are subject to change anytime, Please measure ***your*** amp carefully if a Custom Case is being made. ***Add ¾ inch for each, handle and rubber feet.***

Head:	9.00" height	26.00" width	8.25" depth	34 pounds
Head:	10.75" height	29.00" width	8.25" depth	44 pounds

Please make sure you read this manual to fully know how to operate the amplifier!

ac power connector – back panel
Make sure the power and standby switch is in the off position and that your amplifier is made for the correct power voltage of your location. Plug the supplied power cable into the amps connector first before you plug it into your ac outlet.

power switch
Before you turn the power on make sure the standby switch is off and the power cord is hooked up, it is also wise to have already a speaker cabinet or similar load connected.

standby switch
At this point you must hook up a speaker cabinet to not risk any damage to the output transformer. Please make sure it's hooked up and the impedance is correctly set. Between turning on the power and engaging the standby switch a few minutes should be given to heat up the tubes so they can operate and do not get unnecessary stress on them, it will increase your tube live.

inputs
The Helios has two inputs, these are not your traditional hi and low inputs and give you two essential gain structures to choose from, the inputs can not be switched via an AB box.
The plexi input gives you traditional plexi type gain on channel 2 and a real clean on channel 1.
The hot input gives you the hot roded high gain on channel2 and a clean to plexi type on channel 1.
No matter which input you choose and which channel you play you will find that the Helios cleans up nicely with your guitars volume.

channel 1
Essentially called the clean this channel can give you also nice overdriven sounds.
With just a volume control and a 3 position bright switch you will have enough options to find a desired setting to compliment your guitar.
Plugged into the plexi input with a traditional low output vintage type humbucker you get nice bell tone cleans up until you pass 12 to 1 o'clock, from there on it is staring to get hairy. If you plug into the hot input it gets hairy quiet earlier. This is just an example to give you an indication, of course the cabinet and speaker type will pay a factor in this as well.

volume 1
Sets desired clean level, loudness.

bright switch
The middle position is the neutral setting, toggled to the left will give you a brighter tone and to the right the brightest, use to compliment you guitar, pickups and taste.

channel 2
This can be your traditional plexi type gain or an hot rod gain channel. Additional to the standard gain, bass, middle, treble and volume controls you have a voicing and eq bypass switch for a multitude of overdriven tones.

gain
Here you control the amount of overdrive, channel 2 only.

pre eq switch
This 3 position switch works in conjunction with the gain control, the middle is a neural position much as the dark channel on a plexi, toggled to the left you have the bright channel of a plexi, towards the right you have kind of a jumped plexi input brightness. The higher the gain is set the less effective the switch becomes.

70/80 voicing switch

70 is considered the standard mode, set to 80 the preamp has much more gain and compression which also results in a volume drop, adjust volume 2 to compensate. Also great for lower volume home use!

bass, middle and treble
These are your typical 3 band eq controls and control the frequency as labeled.

eq bypass
This switch lets you bypass the bass, middle and treble controls to route your pre amp directly to the power amp for a raw wide open sound. Gain increases and you get a very dynamic sound reminiscent of a class A amplifier.

volume 2
Sets the loudness of the overdrive channel. For a traditional none master volume plexi sound set this control anywhere from 80% to max, this keeps the path from pre to power amp wide open and you use your gain to set the loudness.

ch1 - ch2
This switch lets you select between the two channels, once you hook up a foot controller this switch becomes none functional.

fx loop switch – back panel
This little toggle switch lets you engage the fx loop, once a foot controller connected the switch is bypassed, none functional.

fx loop & return level control – back panel
The Helios has a buffered series effects loop with a return level control.
Connect the send to the input of the effects unit and the return to the output. When the loop is engaged you can use the return level control to set the volume, most common is to set unison volume when loop is on or off.
If you do not use any effects in the loop you can use it as a switch-able volume boost. Plug a standard instrument cable between the send and return, once the loop is engaged you can set a different volume level via the return level control.

bottom control & punch switch – back panel
Let's you dial in the low end response of the power-amp to accommodate the speaker cabinet used as well as to adjust to the room situation. Turn up for a fuller sound at lower volumes but use conservatively at higher volumes and band situations, you want you guitar to be heard within the music. The punch switch will become active as the bottom control is turned up, the higher the more difference you hear. Engaging the switch will bring the sound more in your face, punchier mids.

speaker outputs – back panel
There is no impedance selector and no shunt tip ground protection therefore it is very important to have a speaker cabinet hooked up before you flip the standby switch on. You have one 16, two 8 and two 4 ohm speaker outputs. Use the one which matches your cabinet, a 16 ohm cabinet into the 16 and so forth. If you want to hook up two cabinets they must have identical impedance and they must be hooked up to half the value, two 16 ohm cabinet will need to be hooked up to the two 8 ohm outputs.

JMP-100w JTM-30w switch – back panel
The JMP-100W mode is the full power mode while the JTM-30W is essentially a half power mode with a variac set to lower voltage. This setting also changes the impedance of the speaker outputs. To rematch cabinet and amp you have to plug the cabinet into half the value of the cabinets impedance, a 16 ohm cabinet should be plugged into the 8 ohm, if the half power mode is engaged! Unplugging your cabinet should be done while the amp is in standby mode!
Is the Helios 50 a Helios 100 at half power? No both amps have power and output transformers for each application with appropriate filtering.

Footcontroller output – back panel
Here you can hook up a standard dual button on/off foot controller with a stereo plug as well as any other controller units. The action is steady (latching) with the tip of the stereo plug switching the channels and the ring controlling the effects loop. The Helios is shipped without foot controller and at time of release Bogner has no foot controllers available.

fuses – back panel
There is a mains and a high tension (h.t.) fuse, both are 3AG slow blow type. 120 volt Helios 100 models use a 4A mains, 220-240 volt models a 3A mains fuse. 120 volt Helios 50 models use a 3A mains, 220-240 volt models a 2A fuse. The h.t. fuse in all Helios models is a 1A.
Always good to check fuses with an ohm meter to verify they are blown.

Troubleshooting
Make sure your read and understand the safety instructions!! Repairs should be done only by knowledgeable Technicians!! Always make sure your Cables, Guitars, Effects and Extension Cabinets are working and hooked up correctly. If you think something is wrong with your Amp, play straight into the Amp with nothing else hooked up other than a Guitar. That way you make sure it is the Amp. If you own a combo unplug the internal speaker and hook up an external speaker cabinet to make sure it's only the amp which is faulty. For noise check the appropriate preamp tubes (refer to f). Tubes are delicate and have a limited live span depending on operating time, temperature and mechanical influences. 99% of all sound and noise problems come from preamp tube failure. We let our amps run for at least two days before we ship them to make sure that the tubes work properly but since they have glass housing and delicate little plates inside them it happened that they got damaged during shipping. Please don't feel discouraged. We don't manufacture tubes and can only retest them to make sure they're okay.

There you have it! It's all up to you now, be creative and push your musical imagination…For Questions call, email or check out our website
bogneramplification.com