

# BUDDA®



MN™-100 GUITAR AMPLIFIER



BUDDA AMPLIFIERS & CABINETS ARE DESIGNED AND BUILT IN THE U.S.A.



Intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



Intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**CAUTION:** Risk of electrical shock — DO NOT OPEN!

**CAUTION:** To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

**WARNING:** To prevent electrical shock or fire hazard, this apparatus should not be exposed to rain or moisture, and objects filled with liquids, such as vases, should not be placed on this apparatus. Before using this apparatus, read the operating guide for further warnings.



Este símbolo tiene el propósito, de alertar al usuario de la presencia de "(voltaje) peligroso" sin aislamiento dentro de la caja del producto y que puede tener una magnitud suficiente como para constituir riesgo de descarga eléctrica.



Este símbolo tiene el propósito de alertar al usuario de la presencia de instrucciones importantes sobre la operación y mantenimiento en la información que viene con el producto.

**PRECAUCION:** Riesgo de descarga eléctrica ¡NO ABRIR!

**PRECAUCION:** Para disminuir el riesgo de descarga eléctrica, no abra la cubierta. No hay piezas útiles dentro. Deje todo mantenimiento en manos del personal técnico cualificado.

**ADVERTENCIA:** Para prevenir choque electrico o riesgo de incendios, este aparato no se debe exponer a la lluvia o a la humedad. Los objetos llenos de liquidos, como los floreros, no se deben colocar encima de este aparato. Antes de usar este aparato, lea la guia de funcionamiento para otras advertencias.



Ce symbole est utilisé dans ce manuel pour indiquer à l'utilisateur la présence d'une tension dangereuse pouvant être d'amplitude suffisante pour constituer un risque de choc électrique.



Ce symbole est utilisé dans ce manuel pour indiquer à l'utilisateur qu'il ou qu'elle trouvera d'importantes instructions concernant l'utilisation et l'entretien de l'appareil dans le paragraphe signalé.

**ATTENTION:** Risques de choc électrique — NE PAS OUVRIR!

**ATTENTION:** Afin de réduire le risque de choc électrique, ne pas enlever le couvercle. Il ne se trouve à l'intérieur aucune pièce pouvant être réparée par l'utilisateur. Confiez l'entretien et la réparation de l'appareil à un réparateur Peavey agréé.

**AVIS:** Dans le but de reduire les risques d'incendie ou de decharge electrique, cet appareil ne doit pas etre expose a la pluie ou a l'humidite et aucun objet rempli de liquide, tel qu'un vase, ne doit etre pose sur celui-ci. Avant d'utiliser de cet appareil, lisez attentivement le guide fonctionnant pour avertissements supplémentaires.



Dieses Symbol soll den Anwender vor unisolierten gefährlichen Spannungen innerhalb des Gehäuses warnen, die von Ausreichender Stärke sind, um einen elektrischen Schlag verursachen zu können.



Dieses Symbol soll den Benutzer auf wichtige Instruktionen in der Bedienungsanleitung aufmerksam machen, die Handhabung und Wartung des Produkts betreffen.

**VORSICHT:** Risiko — Elektrischer Schlag! Nicht öffnen!

**VORSICHT:** Um das Risiko eines elektrischen Schlages zu vermeiden, nicht die Abdeckung entfernen. Es befinden sich keine Teile darin, die vom Anwender repariert werden könnten. Reparaturen nur von qualifiziertem Fachpersonal durchführen lassen.

**WARNUNG:** Um elektrischen Schlag oder Brandgefahr zu verhindern, sollte dieser Apparat nicht Regen oder Feuchtigkeit ausgesetzt werden und Gegenstände mit Flüssigkeiten gefüllt, wie Vasen, nicht auf diesen Apparat gesetzt werden. Bevor dieser Apparat verwendet wird, lesen Sie bitte den Funktionsführer für weitere Warnungen.



Tarkoitettu kiinnittämään käyttäjän huomio sellaiseen eristämättömään vaaralliseen jännitteeseen tuotteen kotelossa, joka saattaa olla riittävän suuri aiheuttaakseen sähköiskuvaaran.



Tarkoitettu kiinnittämään käyttäjän huomio tärkeisiin käyttö- ja huolto-ohjeisiin tuotteen mukana seuraavassa ohjeistuksessa.

**VAROITUS:** Sähköiskun vaara — ÄLÄ AVAA!



**VAROITUS:** Sähköiskuvaaran vuoksi älä poista kantta. Ei sisällä käyttäjän huollettavissa olevia osia. Huoltaminen tulee jättää pätevän huoltohenkilöstön tehtäväksi.

**VAARA:** Sähköiskun tai tulipalon vaaran estämiseksi tästä laitetta ei saa altistaa sateelle tai kosteudelle, eikä sen päälle saa asettaa nesteellä täytettyjä esineitä, kuten maljakoita. Ennen laitteen käyttöä lue muut varoitukset käyttöohjeesta.



Är avsedd att varna användaren för förekomsten av oisolerad "farlig spänning" inom produktens hölje som kan vara av tillräcklig nivå för att personer ska riskera elektrisk stöt.



Är avsedd att uppmärksamma användaren på förekomsten av viktiga handhavande- och underhållsinstruktioner (service) i den litteratur som medföljer produkten.

**OBSERVERA:** Risk för elektrisk stöt — ÖPPNA INTE!



**OBSERVERA:** För att minska risken för elektrisk stöt, avlägsna inte höljet. Inga delar inuti kan underhållas av användaren. Låt kvalificerad servicepersonal sköta servicen.

**VARNING:** För att förebygga elektrisk stöt eller brandrisk bör apparaten inte utsättas för regn eller fukt, och föremål fyllda med vätskor, såsom vaser, bör inte placeras på denna apparat. Läs bruksanvisningen för ytterligare varningar innan denna apparat används.

## IMPORTANT SAFETY INSTRUCTIONS

**WARNING:** When using electrical products, basic cautions should always be followed, including the following:

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding plug. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point they exit from the apparatus.
11. Only use attachments/accessories provided by the manufacturer.
12.  Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Never break off the ground pin. Write for our free booklet "Shock Hazard and Grounding." Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
16. If this product is to be mounted in an equipment rack, rear support should be provided.
17. Note for UK only: If the colors of the wires in the mains lead of this unit do not correspond with the terminals in your plug, proceed as follows: a) The wire that is colored green and yellow must be connected to the terminal that is marked by the letter E, the earth symbol, colored green or colored green and yellow. b) The wire that is colored blue must be connected to the terminal that is marked with the letter N or the color black. c) The wire that is colored brown must be connected to the terminal that is marked with the letter L or the color red.
18. This electrical apparatus should not be exposed to dripping or splashing and care should be taken not to place objects containing liquids, such as vases, upon the apparatus.
19. The on/off switch in this unit does not break both sides of the primary mains. Hazardous energy can be present inside the chassis when the on/off switch is in the off position. The mains plug or appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
20. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures:

Duration Per Day In Hours	Sound Level dBA, Slow Response
<b>8</b>	<b>90</b>
<b>6</b>	<b>92</b>
<b>4</b>	<b>95</b>
<b>3</b>	<b>97</b>
<b>2</b>	<b>100</b>
<b>1 1/2</b>	<b>102</b>
<b>1</b>	<b>105</b>
<b>1/2</b>	<b>110</b>
<b>1/4 or less</b>	<b>115</b>

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Earplugs or protectors to the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss, if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.



**SAVE THESE INSTRUCTIONS!**

**WARNING:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.



# BUDDA<sup>®</sup> MN™-100 GUITAR AMPLIFIER

Congratulations on purchasing this Budda guitar amplifier. After initially creating a reputation for producing boutique tone machines, we have now raised the bar for modern multi-channel tube guitar amplifiers by producing possibly the most sophisticated tube guitar amp available.

By not compromising on the construction or quality of any parts, we can also ensure that for all its features, the most important thing - tone - is not compromised.

And what an array of different tones there are! With three completely independent channels, a tube-driven preamp boost, real spring reverb as well as the patent pending 'PowerPan' tube to solid state rectification control, this amp is a tone chaser's dream. Not only that, but with the flexibility of the effects loops as well as footswitch and MIDI control, this amp will also prove itself to be up to the tasks of modern guitarists who need their amp head to be the centerpiece of a larger system.

Whichever your requirements - authentic tone or modern flexibility - this amp will deliver.

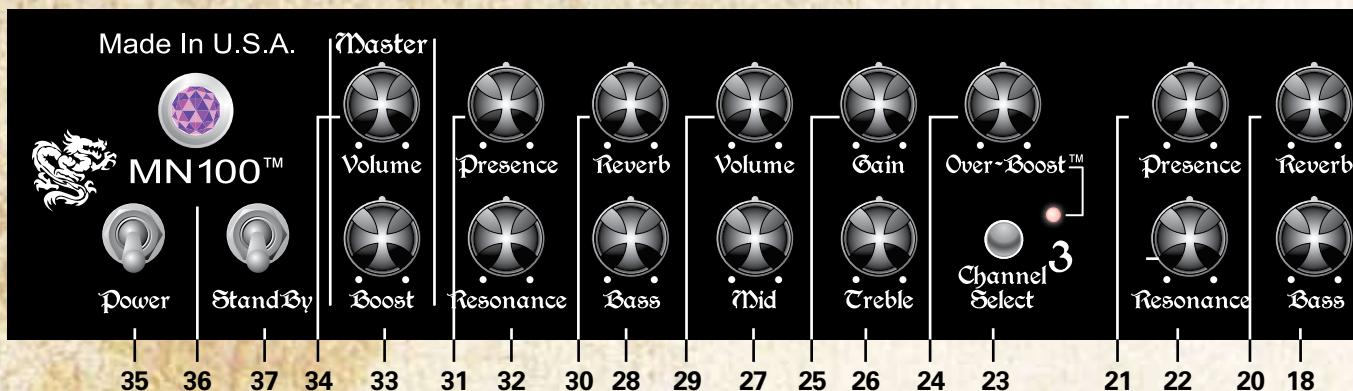
- Five 12AX7 preamp tubes used in three completely independent channels.
- One 12AX7 tube used in tube-driven stomp box style Over-Boost circuit.
- One 12AX7 tube used as the phase splitter driving the power amp.
- Four EL34 power amp tubes and convertible to use four 6L6 tubes.
- LED indication of correct output tube biasing.
- Two 5U4 rectifier tubes convertible to use 5AR4/ GZ34 tubes.
- Unique PowerPan™ control allows panning between solid state and tube rectification.
- Full / Half Power switch.
- Independent preamp EQ (Bass, Mid, Treble), Presence and Resonance controls per channel.
- Three effects loops with independent Send and Mix controls and Channel or Global options.
- Real spring reverb with separate Reverb level control per channel.
- Footswitchable Master Boost with user defined boost level.
- Slave Out and Preamp Out/Power Amp In link jacks.
- Cabinet impedance switch (4, 8 or 16 Ohms).
- Heavy duty Power and Standby toggle switches.
- Classic power status indicator lamp.
- Specially designed 10-button multi-function footcontroller.
- Stores 9 custom presets, and provides extensive MIDI control for automation

## QUICK GUIDE

Please at least read this section before using your new amplifier. We then recommend reading the rest of the manual so you can get the most out of this very sophisticated unit.

### Before applying power:

- 1)** When setting up, ensure that the amplifier speaker output is connected to your speaker enclosure with a good quality speaker cable (do not use a normal shielded instrument cable) and that the Impedance switch on the rear panel is set to the correct setting. The impedance of your enclosure will be marked on the back: 4, 8 or 16 Ohm. If you are using two enclosures of equal impedance rating connected together or connected separately back to the amplifier, then set the impedance switch to the setting that is half the individual value . Therefore, if using two 8 Ohm enclosures, then set the switch to 4 Ohm.
- 2)** Before connecting the supplied IEC line cord make sure the Power and Standby switches are in their down (off) position.
- 3)** Connect the footcontroller with the supplied 8 pin DIN cable to FOOT/IN on the rear of the amp, and connect your guitar to the HIGH Input with a good quality shielded instrument cable.



### FRONT PANEL FUNCTIONS: WHAT THEY DO AND HOW TO USE THEM

#### (1) High Gain

#### (2) Medium Gain

Use 1/4" jacks for connecting to your guitar, or to the output of the last effects pedal if any are used before the amp.

**High** is high impedance and high sensitivity. This will be the most common input to use. This puts the full level of your guitar into the channels, therefore allowing the highest gain.

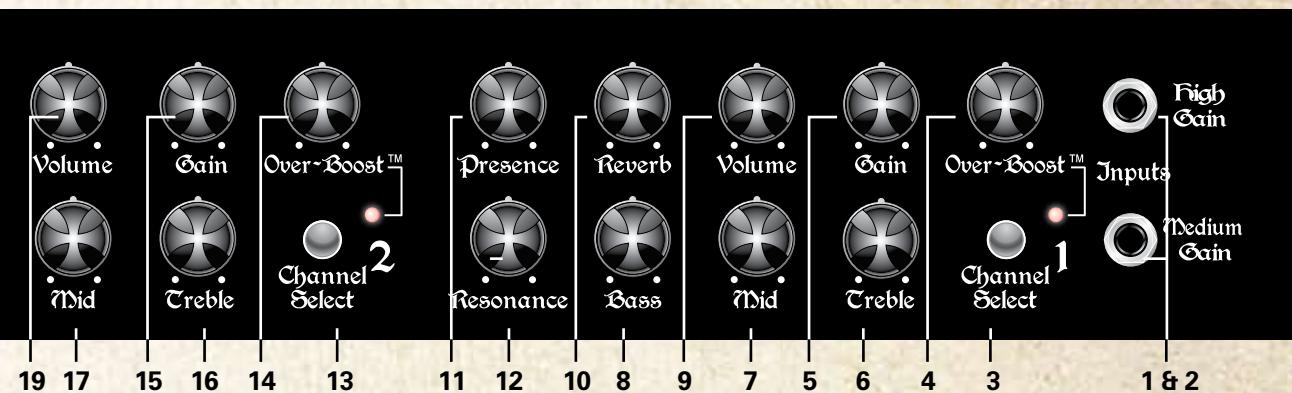
**Medium** is medium impedance and medium sensitivity. This can be used if less gain is required if using an active guitar (battery powered) or if the guitar signal has already been boosted by an external device. It features an attenuator that reduces the input signal by ~10dB.

#### Preamp Channels

There are three completely independent all-tube preamp channels. Keeping them completely independent means that we did not have to compromise the tone on any channel for the sake of another. Although initially the array of the numerous controls may seem intimidating, these are actually arranged identically for each channel. Therefore you will soon get used to which control to go to for adjusting a particular part of the sound on that channel.

Apart from separate eq, reverb, presence and resonance controls, each channel also features an 'Over-Boost' control. The Over-Boost circuit is a footswitchable tube-driven stomp box style gain boost applied before each preamp stage.

- 4)** Before switching on, set the Master Volume to the minimum setting. The first time the amp is used, we recommend setting all the other controls to their mid setting.
- 5)** Now flip the Power switch to the up (on) position. The power status lamp should be lit. Wait at least one minute for the tubes to warm up. **Failure to do this can damage the tubes and reduce their life.** You can use this time to adjust the controls as mentioned above.
- 6)** After at least one minute you can flip the Standby switch to the up (on) position. You will notice that the amp defaults to Preset 1. Gradually turn up the Master Volume to the required playing level. Now you can adjust the rest of the controls to taste, change channels and operate the other functions on the front panel and footcontroller.
- 7)** During short periods of not playing the amplifier can be switched to Standby so that it isn't producing any output, but is warmed up for immediate use when needed. If longer than 30 minutes or so it's probably best to switch off completely.
- 8)** At the end of a playing session it's good practice to turn the Master Volume to minimum then flip the Standby switch to the down (off) position before switching the Power switch to the down (off) position. The rest of the controls can be left as set. Finally we recommend not moving the amplifier for a few minutes to allow the tubes time to cool down.



### Channel 1

This is the 'clean' channel. Depending on the specific setting of the controls, it can produce sparkly clean sounds with plenty of headroom, through to warmer clean tones with a bit of edge from the tubes when driven harder.

#### (3) Channel Select:

Press this switch to select Channel 1, the corresponding LED will be lit either green or red.

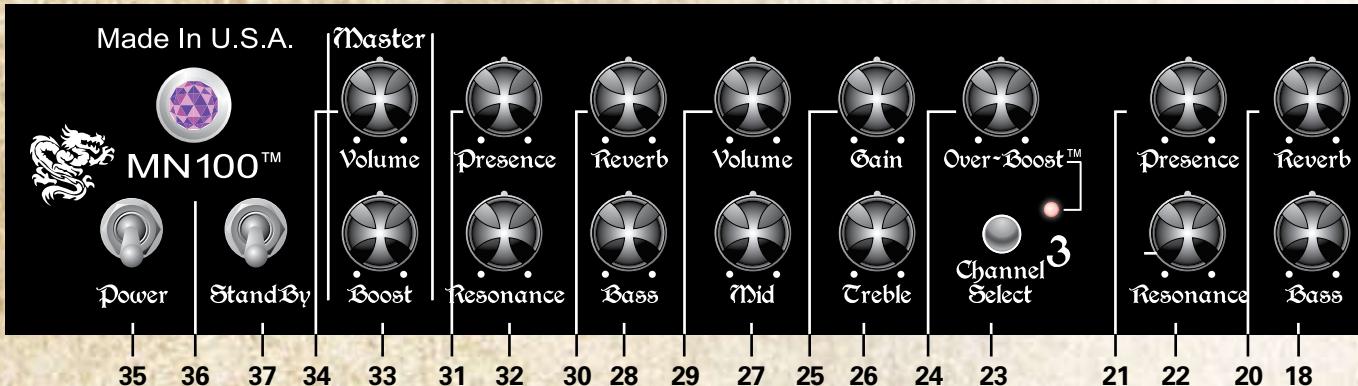
Green is the normal setting; red is when Over-Boost is also on for this channel. Pressing this switch again will alternate between with or without Over-Boost.

If Over-Boost is selected for this channel then this is remembered when you change to another channel. Therefore you don't need to switch it on each time you return to this channel.

Switching of both the channel and Over-Boost can also be done on the footcontroller.

#### (4) Over-Boost:

If Over-Boost is selected on this channel then this control becomes active and sets the amount of pre gain/drive for this channel. At the minimum setting there will be little difference between the normal and Over-Boost sounds, but, as the control is increased, the tube driven stomp box style overdrive will increase and be blended with the straight sound. Blending the two sounds helps to keep the tone well defined as it retains the attack of the original notes.



## FRONT PANEL FUNCTIONS: WHAT THEY DO AND HOW TO USE THEM

### (5) Gain

This control sets how much signal is sent through the Channel 1 preamp. Low to medium settings will produce clean sounds. As the control is turned further clockwise the tone will get warmer and eventually start to add a small amount of overdrive.

### (6) Treble

This passive control sets the level of the high frequencies for Channel 1.

This will seem more powerful when Over-Boost is switched on due to more high frequencies being present in the distortion.

### (7) Mid

This passive control sets the level of the mid range frequencies for Channel 1.

Again it will be more powerful when Over-Boost is switched on.

### (8) Bass

This passive control sets the level of the low frequencies for Channel 1.

### (9) Volume

This sets the overall level of Channel 1 and is used to balance the sound with the other channels after the Gain has been set.

### (10) Reverb

This sets the level of the spring reverb effect on Channel 1.

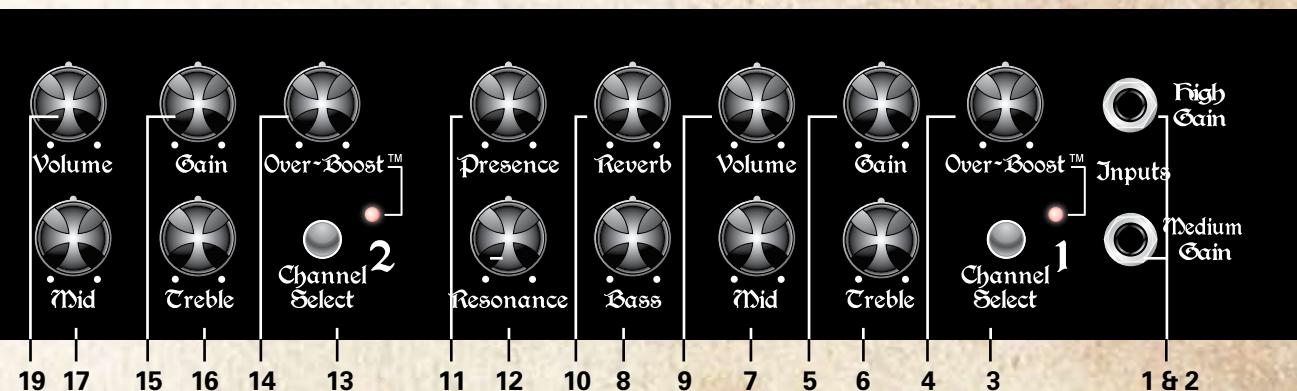
This is also switchable using the footcontroller.

### (11) Presence

This is used to fine tune the high frequency range of the speaker enclosure while on Channel 1, by varying the damping factor of the tube power stage at high frequencies.

### (12) Resonance

This is used to fine tune the low frequency range of the speaker enclosure while on Channel 1, by varying the damping factor of the tube power stage at low frequencies.



## **Channel 2**

This is the 'crunch' channel. Depending on the specific setting of the controls it can produce lightly overdriven tones that clean up nicely when the guitar volume is turned down, through to quite heavily overdriven tones at high Gain settings, especially with the Over-Boost switched on.

### **(13) Channel Select**

Works the same as on Channel 1 but for Channel 2, including switching on Over-Boost.

Can also be switched on the footcontroller.

### **(14) Over-Boost**

Works the same as on Channel 1 but for Channel 2.

### **(15) Gain**

Works the same as on Channel 1 but for Channel 2, however, as more gain is available, it will have a more radical effect to your tone, producing more overdrive the further clockwise it is turned.

### **(16) Treble**

This passive control sets the level of the high frequencies for Channel 2.

### **(17) Mid**

This passive control sets the level of the mid range frequencies for Channel 2.

### **(18) Bass**

This passive control sets the level of the low frequencies for Channel 2.

### **(19) Volume**

Works the same as on Channel 1 but for Channel 2.

### **(20) Reverb**

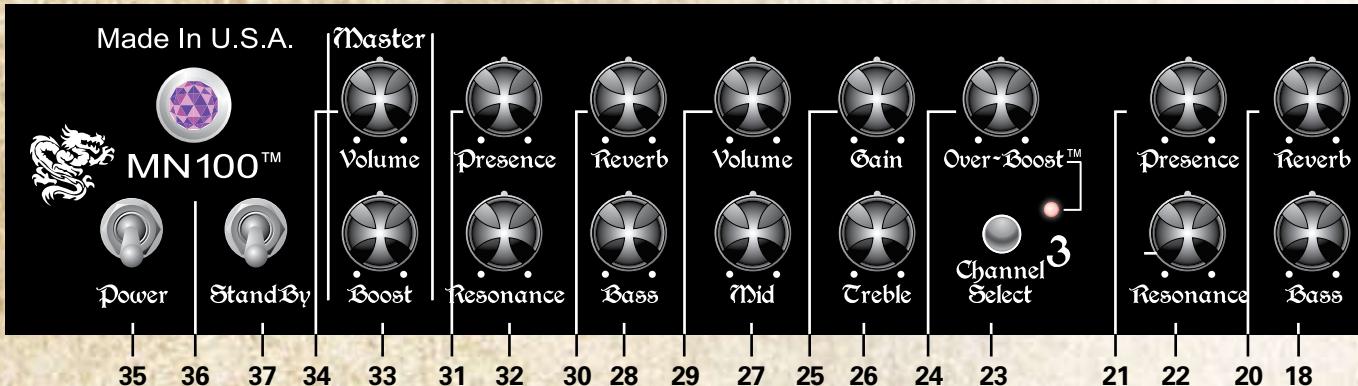
Works the same as on Channel 1 but for Channel 2.

### **(21) Presence**

Works the same as on Channel 1 but for Channel 2.

### **(22) Resonance**

Works the same as on Channel 1 but for Channel 2.



## FRONT PANEL FUNCTIONS: WHAT THEY DO AND HOW TO USE THEM

### Channel 3

This is the 'high gain' channel. Depending on the specific setting of the controls, it can produce warm overdriven tones, seriously heavy thrash tones and anything in-between.

#### (23) Channel Select

Works the same as on Channel 1 but for Channel 3, including switching on Over-Boost. Can also be switched on the footcontroller.

#### (24) Over-Boost

If Over-Boost is selected then this control becomes active. On Channel 3 this acts like a tube-driven, mid-focused, clean boost before the main preamp stage. As the signal then goes into a high gain preamp, this will help to overdrive this channel further, giving even more saturation and sustain that's great for certain 'shredding' guitar techniques such as tapping, legato, and sweep picking. Maximum boost is ~20dB.

#### (25) Gain

Works the same as on Channel 1 but for Channel 3 however, as more gain is available, it will have a more radical effect to your tone, producing more overdrive the further clockwise it is turned.

#### (26) Treble

This passive control sets the level of the high frequencies for Channel 3.

#### (27) Mid

This passive control sets the level of the mid range frequencies for Channel 3.

#### (28) Bass

This passive control sets the level of the low frequencies for Channel 3.

#### (29) Volume

Works the same as on Channel 1 but for Channel 3.

#### (30) Reverb

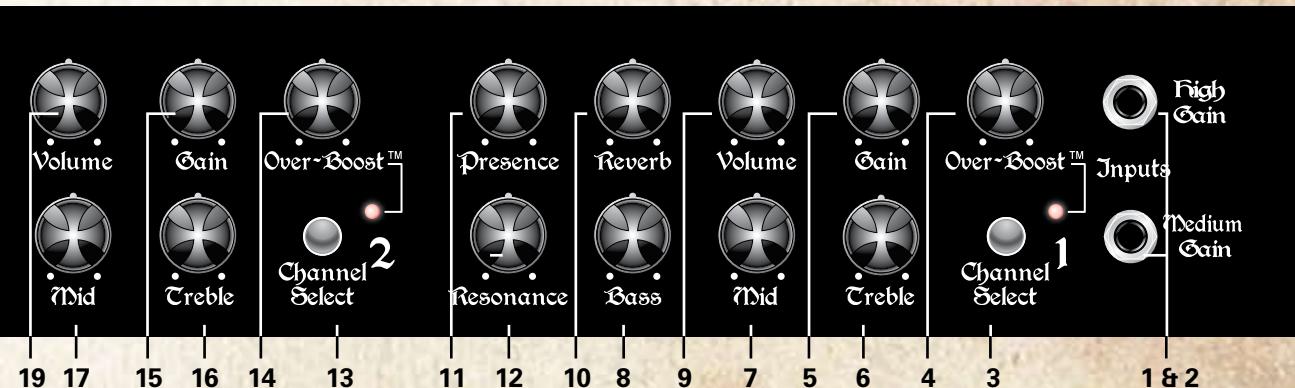
Works the same as on Channel 1 but for Channel 3.

#### (31) Presence

Works the same as on Channel 1 but for Channel 3.

#### (32) Resonance

Works the same as on Channel 1 but for Channel 3.



## MASTER SECTION

### (33) Boost

This sets a user definable volume boost that can be applied to any of the three channels and can be turned on and off using the footcontroller. This is extremely useful when you need a boost in volume for solos, as you don't have to dedicate a particular channel for that use.

The control has been calibrated so that the mid point setting gives a +6dB boost and on full gives +10dB.

### (34) Volume

This sets the overall level of the amp. Once the desired balance between the three channels has been set using their own Volume controls, the entire level of the unit can be increased or decreased by adjusting this control. A good policy to avoid unwanted and possibly damaging loud sounds is to turn this control to minimum before turning the unit on. However it can be left set to the required stage volume and Standby switched to "Off" during breaks, therefore ensuring the correct volume level when returning to the stage.

### (35) Power Switch

This two-way toggle switch applies mains power to the unit. Down is off, up is on. Before switching on, check that the Standby is in the "Off" position.

### (36) Power Status Lamp

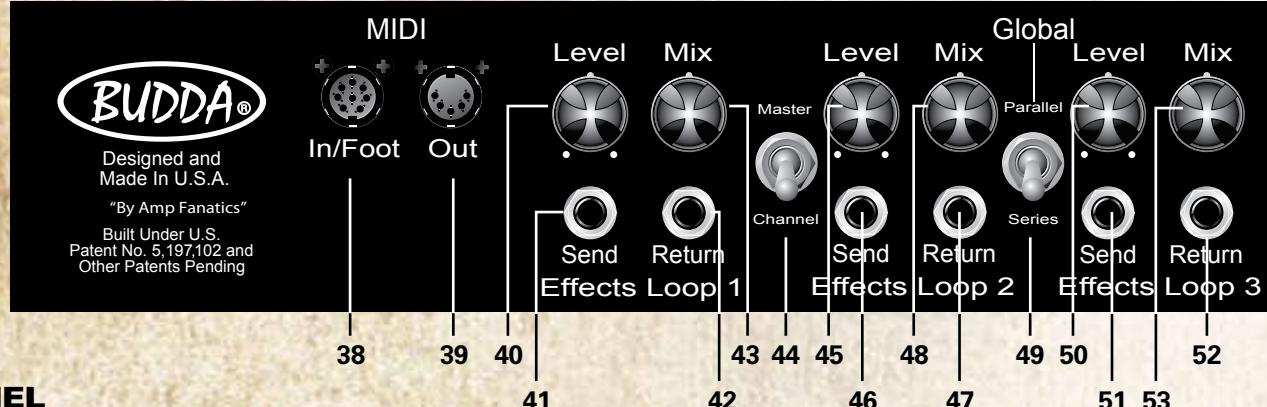
This indicator illuminates when mains power is being applied to the amp.

### (37) Standby Switch

This two-way toggle switch allows the amp to be placed in Standby mode, where the amp can warm up or remain warmed up, before switching up to the fully active mode. Down is Standby, up is fully on.

**Important:** Always have this set to Standby when first switching on the Power switch. Then allow the amp to warm up for at least one minute before switching out of Standby.

Also, at the end of use, try to switch this off at least a few seconds before turning the Power switch off. This prevents any unwanted noise.



## REAR PANEL

### (38) MIDI In/Footswitch

This 8-pin DIN connector is provided for the connection of the remote footcontroller. Preferably this should be connected before the amp is powered up. See the FOOTCONTROLLER section of this manual for a more detailed explanation of operation.

This can also be used as a MIDI IN connection, using a standard 5-pin MIDI cable, if the amp is going to be controlled by a separate MIDI controller other than the supplied footcontroller. See the MIDI section of this manual for a more detailed explanation of the MIDI features.

### (39) MIDI Out

This 5-pin DIN connector is provided to send MIDI messages, including Program Change and Continuous Controller messages, to external MIDI devices. It is useful for linking two amps and keeping their functions synchronized, and for sending your custom preset data to another amp or MIDI backup device. It's also useful to control presets on effect units you may have in the effects loops. See the MIDI section of this manual for a more detailed explanation of the MIDI features.

### Effects Loop 1

This is the dedicated effects loop for Channel 1. It will only be available for use when Channel 1 is selected. It can be switched on and off using the footcontroller.

### (40) Level

This control sets the level of Channel 1 signal being sent to external effects and/or signal processors from the Send jack (41) underneath. The control is calibrated so that, with most effects, the mid point setting will produce basically the same level when switching the loop on or off. However, it will give approximately a +/-10dB variation in either direction if required to achieve the desired balance with the loop on or off.

### (41) Send

This 1/4" mono (TS) jack is to connect to the input of an external effect or signal processor. It will only send signal if Channel 1 and Effects Loop 1 are selected. Use shielded cable with 1/4" mono (TS) phone plugs for all effects loop connections.

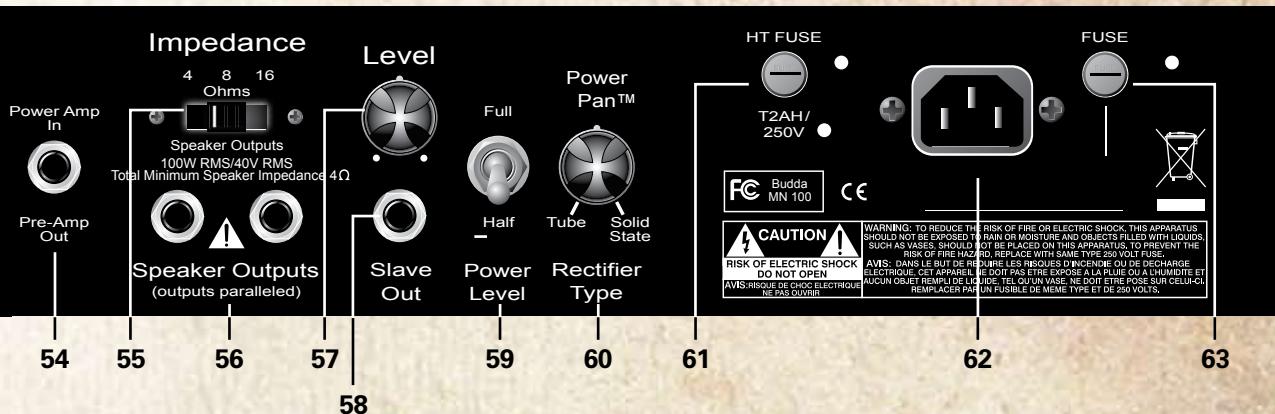
### (42) Return

This 1/4" mono (TS) jack is to connect to the output of an external effect or signal processor.

### (43) Mix

The precise function of this control is dependant on the setting of the Global switch (49).

If Global is set to Series then this control sets the mix between the normal (dry) sound of Channel 1 and the sound of the effect being used in Effects Loop 1. Fully counter-clockwise will be just the normal dry sound (no effects); turning clockwise will increase the amount of the effect heard until fully clockwise where only the sound from the effect/processor is heard.



To use as a series loop, turn this control fully clockwise. To use it as a normal parallel loop set it at or near the mid point to give the required balance between dry and effect.

If Global is set to Parallel, the normal (dry) signal bypasses the effects loops and is always present. In this mode the Mix control sets the level of the effect being used in Effects Loop 1 that is blended with the dry signal. Turning the Mix control clockwise increases the level of the effect.

### **Effects Loop 2**

Depending on the setting of the Master / Channel switch (44) this can either be the dedicated effects loop for Channel 2 or an effects loop for all three channels.

It can be switched on and off using the footcontroller.

### **(44) Master / Channel**

When this switch is set to Channel, Effects Loop 2 will be dedicated for use on Channel 2 only. Effects Loop 2 will then only be available for use when Channel 2 is selected, and this will work the same way as Effects Loops 1 and 3 work with Channels 1 and 3.

This setting can be used if different effects and/or signal processors are to be used for each channel.

Setting this switch to Master will enable Effects Loop 2 to be used as a master effects loop on all three channels. For fairly simple set-ups, with few effects or one multi-processor, this will be the most usable setting.

However, as this is now a Master effects loop, the signal is routed so that if any effects are used in Effects Loop 1 or 3, they can still be used on Channels 1 and 3 respectively and will be placed in series before Effects Loop 2.

In this mode, the footcontroller can still be used to turn the individual Effects Loops on and off, with Effects Loop 2 available on all three channels and Loops 1 and 3 still dedicated to Channels 1 and 3.

### **(45) Level**

This control sets the level of signal being sent to external effects and/or signal processors from the Send jack (46). It is calibrated the same as Level (40) above.

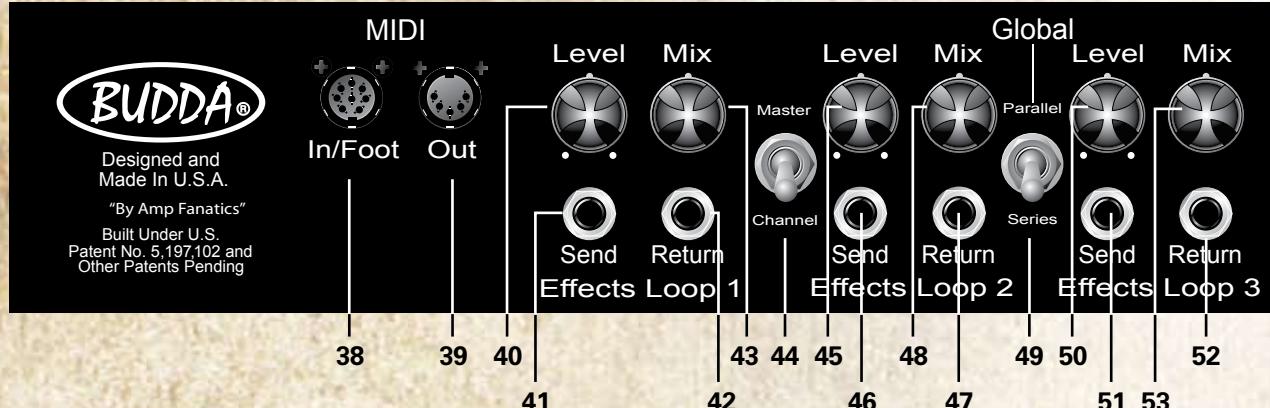
If Channel mode is selected, this will be the level of Channel 2.

If Master mode is selected, it will be the level of whichever channel is on, as well as the level of any effects that are being used in Effects Loop 1 or 3.

### **(46) Send**

Similar to Send (41) above but for Effects Loop 2.

It will only send signal if this loop is turned on either with Channel 2 or in Master mode.



#### **(47) Return**

Similar to Return (42) above but for Effects Loop 2.

#### **(48) Mix**

Similar to Mix (43) above but for Effects Loop 2.

If Channel mode is selected, this will control the mix of the effect on Channel 2.

If Master mode is selected it will control the mix of the effect on the overall sound, regardless of the channel selected.

#### **(49) Global – Parallel/Series**

This determines the routing of the signal around the effects loops.

In Parallel setting, the normal (dry) signal (from whichever channel is being used) is effectively 'hard wired' to go directly around the effects loops unaltered. Therefore, any effects that are applied are always in parallel with the dry signal, which ensures tonal integrity.

In Series mode, the direct signal path is turned off and the whole signal is passed to the effects loop circuitry. Therefore, the user has complete control over the mix of dry and effects signals for each channel by using the controls as described above. Due to the design and very high quality of the parts used, the effects loop circuitry will be sonically transparent.

**Please note: The effect of this switch only applies when at least one of the effects loops are being used. If they are off, the dry signal always bypasses the effects loop circuitry.**

#### **Effects Loop 3**

This is the dedicated effects loop for Channel 3. It will only be available for use when Channel 3 is selected. It can be switched on and off using the footcontroller.

#### **(50) Level**

This control sets the level of Channel 3 signal being sent to external effects and/or signal processors from the Send jack (51). It is calibrated the same as Level (40) above.

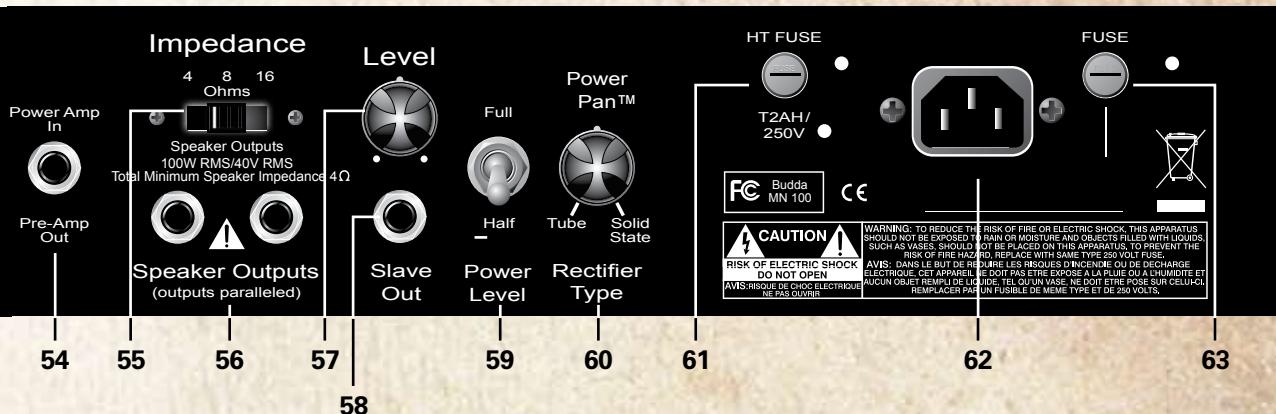
#### **(51) Send**

Similar to Send (41) above but for Effects Loop 3.

It will only send signal if Channel 3 and Effects Loop 3 are selected.

#### **(52) Return**

Similar to Return (42) above but for Effects Loop 3.



### (53) Mix

Similar to Mix (43) above but for Effects Loop 3.

### NOTE: Effects Loop Return Circuitry

An important feature of the return circuitry is that it includes specially designed gate circuits that allow any signal present at the Return jack to pass through, even when the specific loop is turned off.

This means that any delay (echo) or reverb tails are allowed to fade out naturally rather than being abruptly cut off. If there is no signal present, the gates allow the loops to work as normal and shut off any noise that may be coming from an external device.

In Channel mode the gates work the same on all three effects loops. In Master mode, if delay effects are needed at all times it is best to put them in Loop 2, the Master Loop - This is due to the more complex signal routing in Master mode.

### (54) Power Amp In / PreAmp Out

This 1/4" jack facilitates a simple way to link together two MN-100 amps if required. This is a passive, bidirectional connection that just requires the use of a standard shielded cable with 1/4" mono (TS) phone plugs. Simply connect from one amp to another and the same signal will be heard from both amps. The signal is taken from and/or injected after all the controls except the Master Volume.

### (55) Impedance

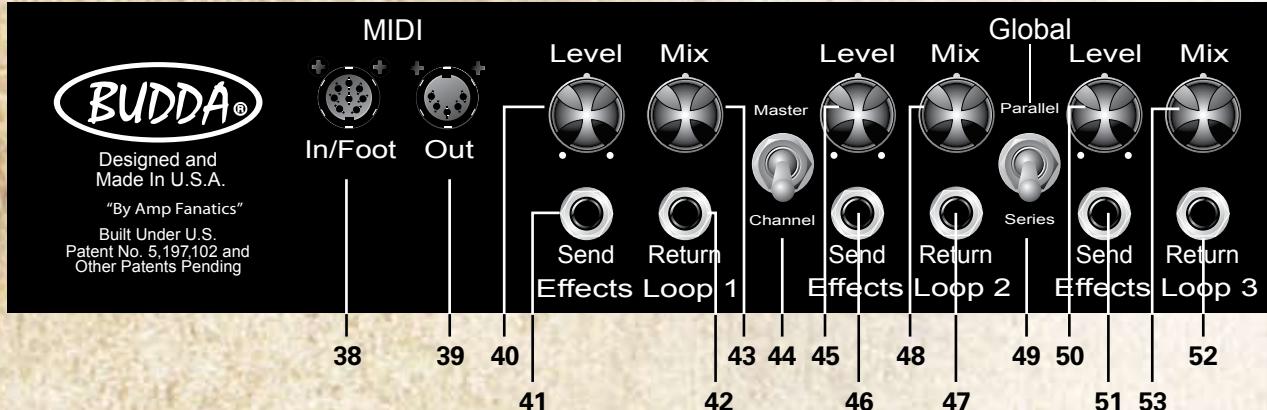
This three-position slide switch allows the selection of speaker enclosure impedance. If one enclosure is used, simply set this to the impedance rating marked on the back of the cabinet. If two enclosures of equal impedance are used, the switch should be set to half the individual value. For example, two 16 Ohm enclosures would necessitate an 8 Ohm setting, while two 8 Ohm enclosures would require a 4 Ohm setting. Minimum speaker impedance is 4 Ohms.

### (56) Speaker Outputs

These paralleled 1/4" mono (TS) jacks are provided for the connection of speaker enclosures. The Impedance switch (55) should be set to match the load of the speaker cabinet(s), as described above. Always use good quality speaker cables (not shielded instrument cable) for these connections.

### (57) Level

This sets the level of the signal at the Slave output (58). If slaving to an effects unit or other device, use the unit's sensitivity LED lights as a gauge to set the slave level, thereby using this control to avoid overloading the input of the effects unit or slave amp.



### (58) Slave Out

This 1/4" mono (TS) jack is a passively buffered signal that is in parallel with the speaker output. It contains the full complement of preamp and power amp characteristics of the amp. Use this output to send the signal to a power amplifier connected to additional speaker cabinets for a louder version of the amp.

### (59) Power Level

This switch sets the maximum power level to either Full or Half (setting it to half literally shuts off two of the four power output tubes). It also switches off one of the two rectifier tubes to more authentically sound like a vintage 50 watt guitar amp. Therefore, if the rectifier tubes are being used, both the 'power amplification' stage and the 'power supply rectification' are being halved. The actual maximum power levels will be dependant on the actual power tubes used and the PowerPan™ setting (more on this below).

When the unit is in HALF-POWER mode, the IMPEDANCE SELECTOR can be more accurately matched to the cabinet according to the impedance selector markings under this switch. In HALF-POWER mode, the nominal load that the amp would be optimized for in full-power mode would double in impedance. If you are using an 8 Ohm cabinet in full-power mode and you switch to half-power mode, maximum "half-power" would be obtained through the 8 Ohm cabinet on the full-power 16 Ohm setting.

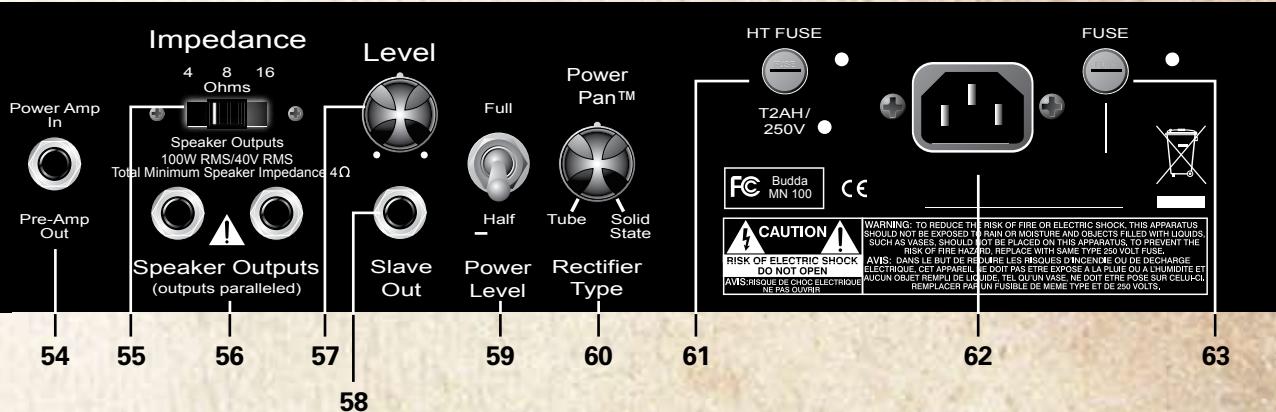
### (60) PowerPan™

This is a patent pending feature that enables the user to select Tube rectification, Solid State rectification, or a blend of anywhere in-between. This allows the user to take advantage of the different compression effects that happen at transients and high volume, which are caused by the variation in power supply sag with tube or solid state rectification. It goes further than what has been done before by allowing the user to blend between the two.

Used in combination with the Power Level switch, the PowerPan feature allows many different power amp tones at different volume levels.

For example: 4x 6L6GC with 2x 5U4 will produce ~100W at full power with solid state rectification and go down to about 25W at half power with just tube rectification.

Using 4x EL34 will generally produce slightly more power (maximum ~120W with solid state rectification) and using 5AR4/GZ34 rectifier tubes will reduce the power supply sag effects, therefore also generally having slightly more power headroom.



### (61) HT Fuse

This fuse is for the high voltage supply for the tubes. Sometimes when a tube goes faulty it will result in this fuse blowing. A fuse is included because without it, collateral damage could occur that could be even more inconveniencing. The fuse is located within the cap of the fuse holder. This fuse must be replaced with one of the same type and value to avoid damaging the amplifier and voiding the warranty. If the amp repeatedly blows the fuse, it should be taken to a qualified service center for repair.

**WARNING: THE FUSE SHOULD ONLY BE REPLACED AFTER THE POWER CORD HAS BEEN DISCONNECTED.**

### (62) IEC Mains Connector

This is a standard IEC power connector. An AC power cable having the appropriate AC plug and ratings for the intended operating voltage is included in the carton. The Power Cable should be connected to the amplifier before connecting to a suitable AC outlet.

### U.S. Domestic AC Power Cable

The power cable supplied with the unit is a heavy duty, three-connector type with a conventional 120 VAC plug with ground pin. If the outlet used does not have a ground pin, a suitable grounding adapter should be used and the third wire should be properly grounded.

**Never break off the ground pin on any equipment. It is provided for your safety.**

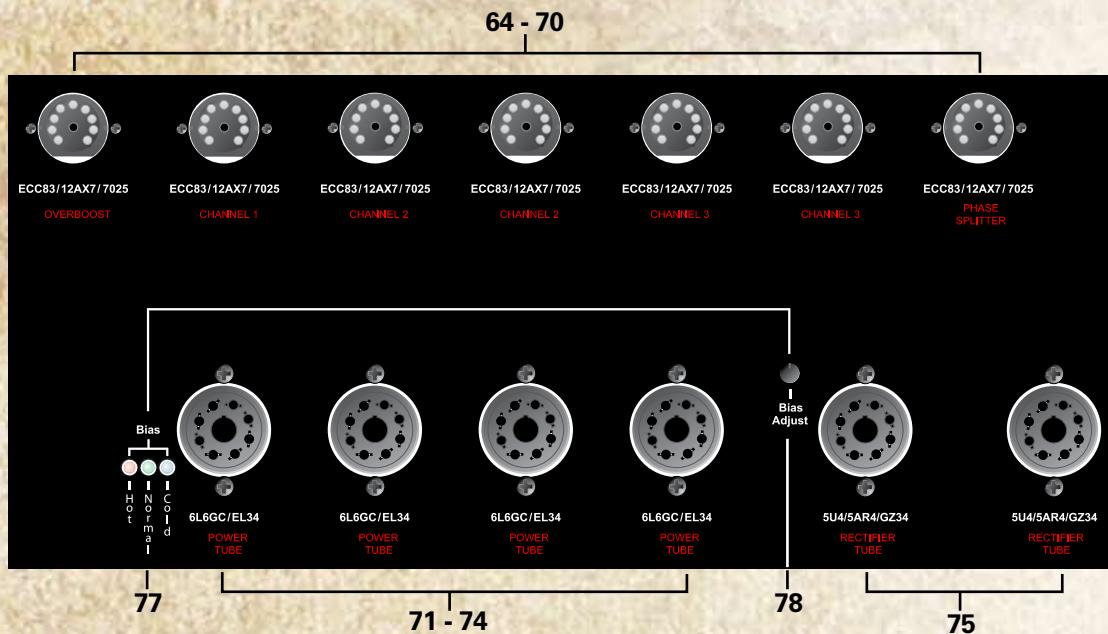
### NOTE FOR UK ONLY:

If the colours of the wires in the mains lead of this unit do not correspond with the coloured markings identifying the terminals in your plug, proceed as follows: (1) The wire that is coloured green and yellow must be connected to the terminal that is marked by the letter E, the earth symbol or coloured green or green and yellow; (2) The wire that is coloured blue must be connected to the terminal that is marked with the letter N or the colour black; (3) The wire that is coloured brown must be connected to the terminal that is marked with the letter L or the colour red.

### (63) Mains Fuse

This fuse is for the mains supply for the amp. The fuse is located within the cap of the fuse holder. This fuse must be replaced with one of the same type and value to avoid damaging the amplifier and voiding the warranty. If the amp repeatedly blows the fuse, it should be taken to a qualified service center for repair.

**WARNING: THE FUSE SHOULD ONLY BE REPLACED AFTER THE POWER CORD HAS BEEN DISCONNECTED.**



## TOP PANEL

### (64 - 70) ECC83 / 12AX7 / 7025 x7

Tubes for Over-Boost, Ch 1, Ch 2 , Ch 2, Ch 3, Ch 3, Phase Splitter respectively.  
When replacing please use good quality tubes.

### (71 - 74) EL34/6L6 x4 Power Tubes

Apart from EL34 type, other types can be used including 6L6, 6550, KT66, KT88 and 6CA7.  
When replacing please use matched quartets of good quality tubes and ensure the biasing is set correctly as described below.

### (75) 5U4 / 5AR4 / GZ34 x2 Rectifier Tubes

Apart from 5U4 type, either or both of these can be replaced with 5AR4 / GZ34 type.  
We have found the 5U4 type makes the tonal difference of tube rectification more apparent.  
When replacing please use good quality tubes.

**NOTE: Due to the high temperatures, do not attempt to replace any tubes unless the amplifier has been turned off for at least 15 minutes. This should only be carried out by a technically competent person.**

### (76) Reverb Connections

These connect to the spring reverb device.

### (77) Bias Status

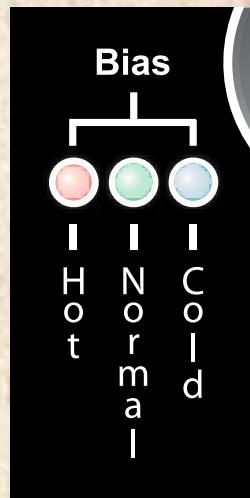
These three LEDs indicate the power tube bias current.

Red is Hot (too high), Green is Normal and Blue is Cold (too low).

These should be observed when checking or adjusting the bias as described below.  
It is normal for the red LED to flash on during actual use at medium to high volumes.

### (78) Bias Adjust

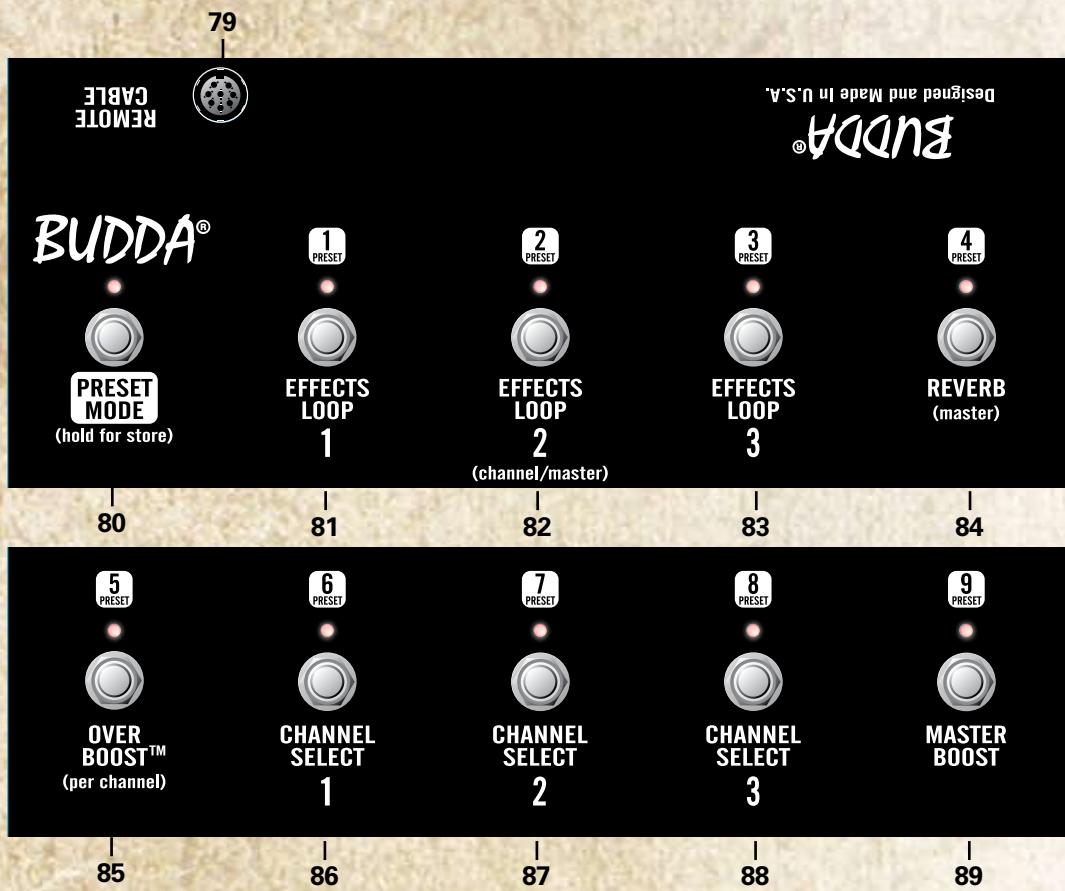
This hole allows access to the trim control inside. Adjusting this will vary the bias supply. This should only be adjusted if it is fully understood what this does, otherwise it could damage your tone, or worse, damage your power tubes.



**CHECKING AND ADJUSTING THE BIAS IS EXTREMELY EASY TO DO BY FOLLOWING THIS PROCEDURE:**

**WARNING:** Removing the rear panel will expose the tubes. These are VERY hot and touching them should be avoided. This procedure should only be carried out by technically competent people and at their own risk.

- Ensure Power and Standby switches are in the down (off) position. Remove rear panel.
- Connect amp to speaker (or dummy load) and power supply.
- Turn Master Volume to minimum and turn Power switch on.
- At this point only the blue LED should be on.
- On rear panel set the Power Level switch to Full and PowerPan to fully Solid State.
- Allow amp to warm up for a few minutes.
- Turn from Standby to fully on and observe the Bias Status LEDs.
- If the green LED is lit then the Bias Adjust is set correctly and can be left alone.
- If the red LED is lit then the bias is too high, if blue LED is lit the bias is too low.
- To adjust, carefully insert a trimmer tool into the Bias Adjust hole and locate the control inside, while being very careful to not touch the tubes. Once in position, turn counter-clockwise to lower bias, clockwise to increase the bias. The optimal setting is green just before the red comes on.
- Once it is set, turn off amp and immediately replace the rear panel.



## FOOTSWITCH

### (79) Remote Cable

This eight-pin DIN connector is provided for connecting the footcontroller to the amplifier IN/FOOT (38) via the cable included in the carton. Preferably connections at the footcontroller and the amplifier should be made before the amp is powered up.

### (80) Preset Mode

This switches the footcontroller between NORMAL mode (default, LED off) and PRESET mode (LED red).

**Quick Boost Feature:** As described below, when in preset mode, the 1-9 switches will recall your 9 custom presets. When you press the switch of the preset that is already active, it will toggle the status of the Master Boost. This allows a quick way to recall a preset for a solo and get it boosted very quickly (just hit the switch twice!). Otherwise, you'd have to hit it, then toggle out of preset mode, then hit the Master Boost switch – tap dance! (Of course, you can save the preset with the boost active, and then the 2nd press would disable the boost.) To make the Master Boost status visual while in preset mode (red LEDs for mode/preset) the 9/Master Boost LED will blink green when the boost is enabled. (If on preset 9, the color will toggle between red and green to show preset number and Master Boost on.)

### (81) Effects Loop 1 / Preset # 1

NORMAL mode: This turns on Effects Loop 1 when using Channel 1. If selected, the LED will be lit green even if on a different channel. Also it can be switched on and off even when using another channel. However, Loop 1 will only actually be on when using Channel 1.

PRESET mode: This selects Preset 1. If selected, the LED will be lit red.

### (82) Effects Loop 2 / Preset # 2

NORMAL mode: This turns on Effects Loop 2 when using Channel 2, and also when using Channels 1 and 3 if Loop 2 is set to Global (refer to point 44). If selected, the LED will be lit green even if on a different channel. Also it can be switched on and off even when using another channel.

PRESET mode: This selects Preset 2. If selected, the LED will be red.

### (83) Effects Loop 3 / Preset # 3

NORMAL mode: This turns on Effects Loop 3 when using Channel 3. If selected, the LED will be lit green and it can be switched on and off even when using another channel. However, Loop 3 will only actually be on when using Channel 3.

PRESET mode: This selects Preset 3. If selected, the LED will be red.

**(84) Reverb / Preset #4**

NORMAL mode: This turns the REVERB on and off. The LED will be lit GREEN.

PRESET mode: This selects Preset 4. If selected, the LED will be red.

**(85) Over Boost / Preset #5**

NORMAL mode: This turns OVER BOOST on and off for the current channel. When switching between channels, this will remember what the last setting was for each. The LED will be green when OVER BOOST is on.

PRESET mode: This selects Preset 5. If selected, the LED will be red.

**(86) Channel Select 1 / Preset #6**

NORMAL mode: This selects Channel 1. The LED will be lit GREEN. If pressed a 2nd time, the channel will return to the previous setting. This allows quick changing between two channels using a single switch.

PRESET mode: This selects Preset 6. If selected, the LED will be red.

**(87) Channel Select 2 / Preset #7**

NORMAL mode: This selects Channel 2. The LED will be lit GREEN. If pressed a 2nd time, the channel will return to the previous setting. This allows quick changing between two channels using a single switch.

PRESET mode: This selects Preset 7. If selected, the LED will be red.

**(88) Channel Select 3 / Preset #8**

NORMAL mode: This selects Channel 3. The LED will be lit GREEN. If pressed a 2nd time, the channel will return to the previous setting. This allows quick changing between two channels using a single switch.

PRESET mode: This selects Preset 8. If selected, the LED will be red.

**(89) Master Boost / Preset #9**

NORMAL mode: This turns the Master Boost on and off. The LED will be lit green.

PRESET mode: This selects Preset 9. If selected, the LED will be red.

**Using Preset Mode**

Each of the 9 presets remembers the current channel, over-boost on/off, reverb on/off, effects loop on/off and master boost on/off. Additionally, it remembers the over-boost and effects loop status of the two inactive channels. This way you can, for example, have a clean preset saved without over-boost, and know that when you switch to Channel 2, over-boost will be on.

The amp comes from the factory with 9 default presets that you can modify at will. When the PRESET MODE light is on, you can use the 9 other footswitches to recall those 9 presets. At any time you can switch to NORMAL mode and make changes to that sound. This can be during a performance and not permanently stored, or to edit a preset and store to one of the 9 settings.

**NOTE: The amp will power up into Preset 1. If the amp is powered up without the footswitch connected, the effects loops, reverb and master boost will be enabled. This is because there isn't a way to enable them manually without the footswitch.**

**Storing Presets**

To store the current settings into one of the 9 presets, you start by holding the PRESET MODE switch down for a second or two, after which the other LEDs will blink (except the one for the current preset which will be on steady – a way to remind you of which preset you were working with). At this point you can press one of the 9 preset switches to store there, or press PRESET MODE again to cancel.

You can initiate this from PRESET mode or from NORMAL mode. After the store (or cancel) it will return to the mode you were in. So you can setup and store 9 presets without ever entering PRESET mode if you wish. It's typical to set up your sound in NORMAL mode, then store your creation to one of the presets.

**Linking to another amp and/or effects units with the MIDI Out**

You can connect the MIDI Out to the MIDI In of another MN-100 to synchronize the two amps. With the footswitch connected to the first amp, any changes you make with the footswitch (or front panel) will be duplicated on the 2nd amp – if the 2nd amp is on the same MIDI channel.

You can also link the MIDI from the amp (or from the 2nd amp) to an effects unit to synchronize presets. If the effects unit can store presets, they can change automatically when you recall presets on the footswitch.

## **POWER AMPLIFIER SECTION**

### **TUBES:**

Four EL34 tubes with 12AX7 phase splitter / driver

### **RATED POWER & OUTPUT IMPEDANCE:**

120 Watts RMS into 16, 8 or 6 Ohms

### **POWER @ CLIPPING:**

(typically @ 5% THD, 1 kHz, 120 VAC line)

100 Watts RMS into 16, 8 or 4 Ohms

### **FREQUENCY RESPONSE:**

+/-3 dB, 50Hz to 20kHz @ 90 Watts RMS into 8 Ohms

### **HUM & NOISE:**

Greater than 76dB below rated power

### **POWER & CONSUMPTION:**

Domestic: 400 Watts, 50/60 Hz, 120 V AC

Export: 400 Watts, 50/60Hz, 220-230/240 V AC

### **PREAMP SECTION:**

#### **TUBES:**

Six 12AX7 tubes

### **THE FOLLOWING SPECS ARE MEASURED @ 1KHZ WITH THE CONTROLS PRESET AS FOLLOWS:**

Over-Boost off

All EQ controls mid way

Channel Volumes @ maximum

Master Volume @ half way

Boost on and @ maximum

Resonance and Presence control @ mid way

Effects loops off

Nominal levels are with Gain @ mid way

All levels increased by 10dB if using Medium input.

### **CHANNEL 1:**

Nominal input level: -12dBu, 200mV RMS

### **CHANNEL 2:**

Nominal input level: -46dBu, 4mV RMS

### **CHANNEL 3:**

Nominal input level: -58dBu, 1mV RMS

### **EFFECTS SEND:**

Load impedance: 1k Ohms or greater

Minimum Output: -32dBu, 0.02mV RMS (with -20dBu signal)

Maximum Output: +1dBu, 1.6V RMS (with 0dBu signal)

Unity gain with Send set at mid position, -10dB at min, +4dB at max.

### **EFFECTS RETURN:**

Impedance: 100k Ohms

Minimum Input Sensitivity: -12dBu, 0.18mV RMS

Maximum Input Sensitivity: +10dBu, 2.5V RMS

### **POWER AMP OUT / PREAMP IN:**

Nominal output level: +4dBu, 1.2V RMS

Load impedance: 1k Ohms or greater

Minimum Input Sensitivity: 0dBu, 0.775V RMS (with Master on max)

Maximum Input Sensitivity: +6dBu, 1.6V RMS (with Master on half)

Input impedance: 250k Ohms

### **SLAVE OUT:**

Maximum output level: +22dBu, 10V RMS (at full power)

Load impedance: 10k Ohms or greater

### **REMOTE FOOTCONTROLLER:**

Special ten-button metal footswitch with LED indicators and detachable cord (supplied). Selects between three channels, Over-Boost, three effect loops, Reverb, and Master Boost as well as nine Preset modes.

### **SYSTEM HUM & NOISE @ NOMINAL LEVEL:**

(Clean channel – 20Hz to 20kHz unweighted)

Greater than 74dB below rated power

### **EQUALIZATION:**

Specifically designed bass, mid & treble passive-type EQ on each preamp channel.

Resonance and Presence damping EQ on each channel.

### **DIMENSIONS & WEIGHT:**

11.5" (292mm) H x 28.25" (717mm) W x 11.25" (286mm) D  
60.6 lbs (27.55 kg)

**NOTE: FOR PROPER VENTILATION, ALLOW 24"  
(600MM) FROM NEAREST COMBUSTIBLE SURFACE.**

## Budda MN™-100 MIDI Implementation

*This amp is designed to be extremely functional with the included 10-button footswitch. The 8-pin footswitch jack also works as a standard 5-pin MIDI input - to go along with the standard 5-pin MIDI output. There are times when the amp will be run with other types of MIDI foot controllers, a PC in the studio, or by an automated rack rig - or linked to another MN-100 via MIDI. This is the information you need to mate this amp with other MIDI devices.*

**NOTE:** The MIDI Out will send data to another MN-100 (for function sync), or to a PC (for 2-way com during remote control or preset dump). This jack does not act like an Out/Thru. Data received at the MIDI In doesn't result in data on the MIDI Out unless it was a valid message for this amp.

### MIDI CC

*MIDI Continuous Controllers are used to change one function at a time. After selecting a preset (see below), modifications to that preset can be done with these messages.*

*NOTE: These messages when received will be echoed to the MIDI Out jack for sync'ing with another MN-100.*

Bn CC# DATA (DECIMAL)	WHERE n=CHAN-1 (HEX)	DATA: ANY		
1	01h	Select chan 1		
2	02h	Select chan 2		
3	03h	Select chan 3		
		<b>DATA: 00H-3FH</b>	<b>DATA: 40H-7FH</b>	
4	04h	OverBoost OFF	OverBoost ON	(active channel)
5	05h	OverBoost 1 OFF	OverBoost 1 ON	
6	06h	OverBoost 2 OFF	OverBoost 2 ON	
7	07h	OverBoost 3 OFF	OverBoost 3 ON	
8	08h	Master Boost OFF	Master Boost ON	
9	09h	Reverb OFF	Reverb ON	
10	0Ah	FX Loop OFF	FX Loop ON	(active channel)
11	0Bh	FX Loop 1 OFF	FX Loop 1 ON	
12	0Ch	FX Loop 2 OFF	FX Loop 2 ON	
13	0Dh	FX Loop 3 OFF	FX Loop 3 ON	

EXAMPLE: B0 08 7F  
ENABLES MASTER  
BOOST (MIDI CHAN 1)

**MIDI PROGRAM** *MIDI Program Changes are used to recall presets. Typically a preset will reconfigure all functions on the amp at one time. (Programs 9-11 below are exceptions as they only affect the channel.)*

*NOTE: These messages when received will be echoed to the MIDI Out jack for sync'ing with another MN-100.*

### USER PRESETS

Cn DATA (DECIMAL)	WHERE n=CHAN-1 (HEX)	CHANNEL	OVERBOOST (SAVES ALL 3)	MASTER BOOST	REVERB	FX LOOP (SAVES ALL 3)
0	00h	preset 1	preset 1	preset 1	preset 1	preset 1
1	01h	preset 2	preset 2	preset 2	preset 2	preset 2
2	02h	preset 3	preset 3	preset 3	preset 3	preset 3
3	03h	preset 4	preset 4	preset 4	preset 4	preset 4
4	04h	preset 5	preset 5	preset 5	preset 5	preset 5
5	05h	preset 6	preset 6	preset 6	preset 6	preset 6
6	06h	preset 7	preset 7	preset 7	preset 7	preset 7
7	07h	preset 8	preset 8	preset 8	preset 8	preset 8
8	08h	preset 9	preset 9	preset 9	preset 9	preset 9

EXAMPLE: C0 00 RECALLS  
FIRST USER PRESET  
(MIDI CHAN 1)

### CHANNEL ONLY

Cn DATA (DECIMAL)	WHERE n=CHAN-1 (HEX)	CHANNEL	OVERBOOST	MASTER BOOST	REVERB	FX LOOP
9	09h	1	no change	no change	no change	no change
10	0Ah	2	no change	no change	no change	no change
11	0Bh	3	no change	no change	no change	no change

## Budda MN™-100 MIDI Implementation

**FACTORY MAP:** *The Factory Map is basically a long list of fixed presets with every combination of function. If automating a performance from a MIDI rig, any combination of these functions can be found in this binary-style table.*

**NOTE:** on ch. 2 presets FX Loop (chan) and FX Loop 2/GLBL are philosophically the same thing. On all ch. 2 presets, FX Loop2/Glbl will be in control and FX Loop (chan) will be ignored.

(DECIMAL)	(HEX)	CHANNEL	OVERBOOST	MASTER BOOST	REVERB	FX LOOP (CHAN)	FX LOOP2/GLBL	BLANK = OFF X = ON N/A = NOT APPLICABLE
12	0Ch	1						
13	0Dh	2				n/a		
14	0Eh	3						
15	0Fh	1	X					
16	10h	2	X			n/a		
17	11h	3	X					
18	12h	1		X				
19	13h	2		X		n/a		
20	14h	3		X				
21	15h	1	X	X				
22	16h	2	X	X		n/a		
23	17h	3	X	X				
24	18h	1			X			
25	19h	2			X	n/a		
26	1Ah	3			X			
27	1Bh	1	X		X			
28	1Ch	2	X		X	n/a		
29	1Dh	3	X		X			
30	1Eh	1		X	X			
31	1Fh	2		X	X	n/a		
32	20h	3		X	X			
33	21h	1	X	X	X			
34	22h	2	X	X	X	n/a		
35	23h	3	X	X	X			
36	24h	1				X		
37	25h	2				n/a		
38	26h	3				X		
39	27h	1	X			X		
40	28h	2	X			n/a		
41	29h	3	X			X		
42	2Ah	1		X		X		
43	2Bh	2		X		n/a		
44	2Ch	3		X		X		
45	2Dh	1	X	X		X		
46	2Eh	2	X	X		n/a		
47	2Fh	3	X	X		X		
48	30h	1			X	X		
49	31h	2			X	n/a		
50	32h	3			X	X		
51	33h	1	X		X	X		
52	34h	2	X		X	n/a		
53	35h	3	X		X	X		
54	36h	1		X	X	X		
55	37h	2		X	X	n/a		
56	38h	3		X	X	X		
57	39h	1	X	X	X	X		
58	3Ah	2	X	X	X	n/a		
59	3Bh	3	X	X	X	X		
60	3Ch	1				X		
61	3Dh	2				n/a	X	
62	3Eh	3					X	

(DECIMAL)	(HEX)	CHANNEL	OVERBOOST	MASTER BOOST	REVERB	FX LOOP (CHAN)	FX LOOP2/GLBL	BLANK = OFF X = ON N/A = NOT APPLICABLE
63	3Fh	1	X				X	
64	40h	2	X			n/a	X	
65	41h	3	X				X	
66	42h	1		X			X	
67	43h	2		X		n/a	X	
68	44h	3		X			X	
69	45h	1	X	X			X	
70	46h	2	X	X		n/a	X	
71	47h	3	X	X			X	
72	48h	1			X		X	
73	49h	2			X	n/a	X	
74	4Ah	3			X		X	
75	4Bh	1	X		X		X	
76	4Ch	2	X		X	n/a	X	
77	4Dh	3	X		X		X	
78	4Eh	1		X	X		X	
79	4Fh	2		X	X	n/a	X	
80	50h	3		X	X		X	
81	51h	1	X	X	X		X	
82	52h	2	X	X	X	n/a	X	
83	53h	3	X	X	X		X	
84	54h	1				X	X	
85	55h	2				n/a	X	
86	56h	3				X	X	
87	57h	1	X			X	X	
88	58h	2	X			n/a	X	
89	59h	3	X			X	X	
90	5Ah	1		X		X	X	
91	5Bh	2		X		n/a	X	
92	5Ch	3		X		X	X	
93	5Dh	1	X	X		X	X	
94	5Eh	2	X	X		n/a	X	
95	5Fh	3	X	X		X	X	
96	60h	1			X	X	X	
97	61h	2			X	n/a	X	
98	62h	3			X	X	X	
99	63h	1	X		X	X	X	
100	64h	2	X		X	n/a	X	
101	65h	3	X		X	X	X	
102	66h	1		X	X	X	X	
103	67h	2		X	X	n/a	X	
104	68h	3		X	X	X	X	
105	69h	1	X	X	X	X	X	
106	6Ah	2	X	X	X	n/a	X	
107	6Bh	3	X	X	X	X	X	

## Budda MN™-100 MIDI Implementation

### MIDI SYSEX

**MIDI System Exclusive Commands** are used to do all kinds of things that standard commands don't handle. The MN-100 uses Sysex for things like backing up or restoring the 9 user presets, or transferring them to a 2nd amp.

**NOTE:** Except where noted below these messages when received will NOT be echoed to the MIDI Out jack. BUT if the message does not have the matching MIDI channel of the first amp, it WILL echo it in case the 2nd amp matches.

#### 9-PRESET DUMP REQUEST:

F0h	00h	00h	1Bh	15h	MIDI chan - 1 (0-15)	00h	F7h (no data)
-----	-----	-----	-----	-----	-------------------------	-----	------------------

When the amp receives this command, it will send a 9-preset dump message (see below) to the MIDI Out jack. If connected to another MN-100's In jack (and that amp on same MIDI channel), the presets will be copied to that amp. Connect the MIDI Out to a storage device to backup your 9 custom presets.

#### 9-PRESET DUMP (RECEIVE OR SEND)

F0h	00h	00h	1Bh	15h	MIDI chan - 1 (0-15)	01h	36 nibbleized bytes (presets 0-8)	F7h
-----	-----	-----	-----	-----	-------------------------	-----	--------------------------------------	-----

When the amp receives this command, it will overwrite the 9 custom presets with the data in the command (9 presets x 4 nibbleized bytes) - and ECHO the dump in case there is a 2nd amp connected to the MIDI Out (and on the same MIDI channel). The amp will SEND this data if it receives the dump request above.

Additionally, this dump can be initiated manually by holding the Channel Select 1 button and pressing the Channel Select 2 button.

#### CURRENT SETTING DUMP REQUEST:

F0h	00h	00h	1Bh	15h	MIDI chan - 1 (0-15)	04h	F7h (no data)
-----	-----	-----	-----	-----	-------------------------	-----	------------------

When the amp receives this command, it will send a current setting dump message (below) to the MIDI Out jack. The main purpose is for a PC editor to get the current audible setting to sync its display with the amp. This setting could be different from any of the 9 presets if it has been modified in Stomp mode and not stored yet.

#### CURRENT SETTING DUMP:

F0h	00h	00h	1Bh	15h	MIDI chan - 1 (0-15)	05h	4 nibbleized bytes (current audible setting)	F7h
-----	-----	-----	-----	-----	-------------------------	-----	---	-----

The amp will send this message when requested, but will ignore it if received. The current setting can be set easily with controller or program change messages, so this method is not supported.

#### PRESET STORE

F0h	00h	00h	1Bh	15h	MIDI chan - (0-15)	1 06h	preset #1 (1-9)	F7h
-----	-----	-----	-----	-----	-----------------------	-------	--------------------	-----

When the amp receives this command, it will save the current audible preset to one of the 9 custom presets. The audible preset could be modified via MIDI CC commands. Once the preset is satisfactory, it can be saved to one of the 9 custom locations with this command. That would be the method of remote control with a PC, or for creating an editor/librarian application. Message is echoed in case there is a 2nd amp on the same channel.

#### PRESET BIT DEFINITION 1 = ACTIVE

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
n/a		reverb		effects loop 3, 2, 1	n/a			master boost		1 for chan 3 0 for chan 1 or 2	1 for chan 1 0 for chan 2 or	0	Overboost 3 ch. 3, 2, 1		

#### INFO REQUEST:

F0h	00h	00h	1Bh	15h	MIDI chan - (0-15)	1 09h	F7h (no data)
-----	-----	-----	-----	-----	-----------------------	-------	------------------

When the amp receives this command, it will send the info dump message (below), which basically just contains the status of the FX Loop 2 switch on the back of the amp. That could be useful to a PC editor that wants to show a difference in the fx loop mode.

#### INFO DUMP:

F0h	00h	00h	1Bh	15h	MIDI chan - 1 (0-15)	0Ah	FX Loop 2 mode 0=chan; 1=global	F7h
-----	-----	-----	-----	-----	-------------------------	-----	------------------------------------	-----

The amp will send this message when requested, but will simply echo it if received. This is just a way for a PC to query info from the amp.

#### SET MIDI CHANNEL VIA SYSEX:

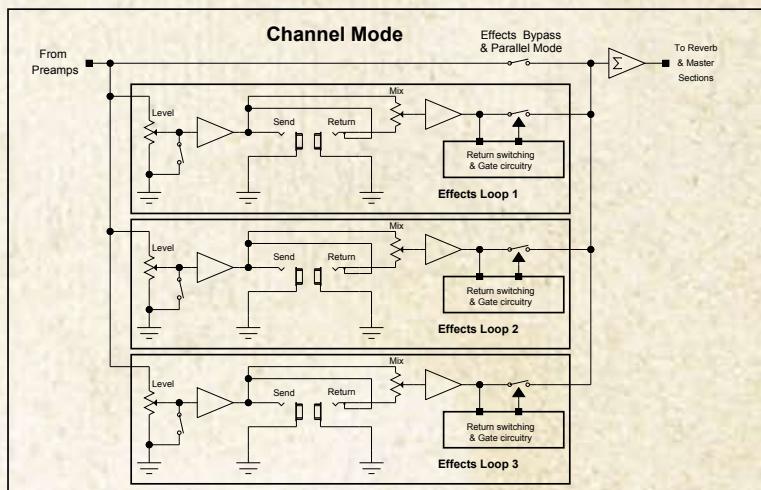
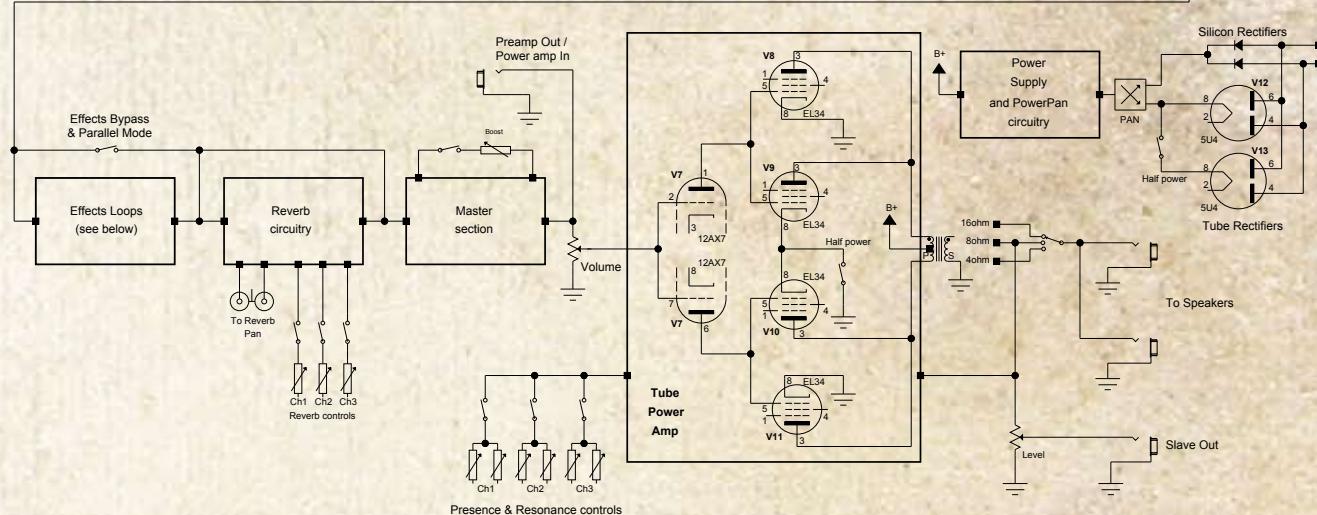
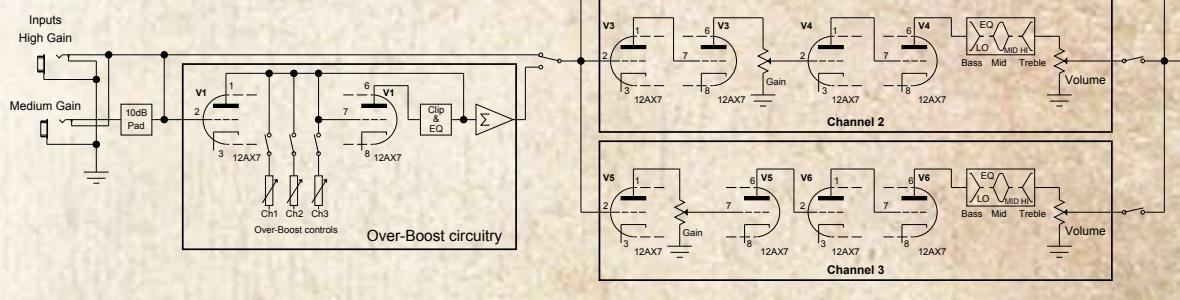
default chan=1	F0h	00h	00h	1Bh	15h	don't care (<= 0x7F)	0Dh	channel - 1 (0-15)	F7h
----------------	-----	-----	-----	-----	-----	-------------------------	-----	-----------------------	-----

#### VIA FOOTSWITCH:

Hold the last footswitch (9/Master Boost) for 2 seconds to enter MIDI channel select mode. The LEDs on the 1-8 footswitches will blink. You can then choose MIDI channel 1-8 by pressing one of those. You can also press 9/Master Boost again to cancel the operation.

# Budda® MN™-100

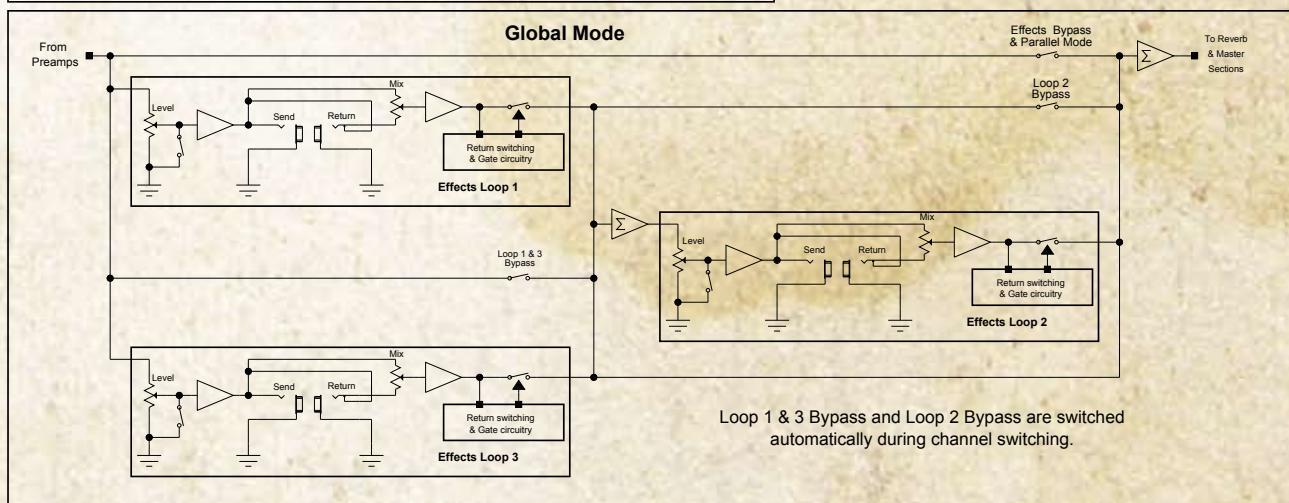
**Block Diagram  
of main signal  
path and controls**



**Channel Mode:**  
Each effect loop only works when the same channel is selected.

**Global Mode:**  
Effects Loops 1 and 3 only work when the same channel is selected.

Effects Loop 2 can be selected on any channel.  
If two loops are on then the signal is routed through loop 1 or 3 then through loop 2.  
Therefore loop 2 is the Master / Global loop.



Loop 1 & 3 Bypass and Loop 2 Bypass are switched automatically during channel switching.

# BUDDA AMPLIFICATION

## LIMITED WARRANTY

EFFECTIVE DATE: AUGUST 1, 2009

### What This Warranty Covers

Your Budda Warranty covers defects in material and workmanship in Budda products purchased and serviced in the U.S.A. and Canada.

### What This Warranty Does Not Cover

The Warranty does not cover: (1) damage caused by accident, misuse, abuse, improper installation or operation, rental, product modification or neglect; (2) damage occurring during shipment; (3) damage caused by repair or service performed by persons not authorized by Budda; (4) products on which the serial number has been altered, defaced or removed; (5) products not purchased from an Authorized Budda Dealer.

### Who This Warranty Protects

This Warranty protects only the original retail purchaser of the product.

### How Long This Warranty Lasts

The Warranty begins on the date of purchase by the original retail purchaser. The duration of the Warranty is as follows:

PRODUCT CATEGORY	DURATION
AMPLIFIERS, OTHER THAN TUBES AND SPEAKER COMPONENTS	1 YEAR
TUBES	90 DAYS
SPEAKER COMPONENTS (INCL. SPEAKERS, BASKETS, DRIVERS, DIAPHRAGM REPLACEMENT KITS AND PASSIVE CROSSOVERS)	90 DAYS

### What Budda Will Do

We will repair or replace (at Budda's discretion) products covered by warranty at no charge for labor or materials. If the product or component must be shipped to Budda for warranty service, the consumer must pay initial shipping charges. If the repairs are covered by warranty, Budda will pay the return shipping charges.

### How To Get Warranty Service

- (1) Take the defective item and your sales receipt or other proof of date of purchase to your Authorized Budda Dealer or Authorized Budda Service Center.
- (2) Call Budda Service at (877) 612-8332 and obtain clearance to mail your amplifier to Budda.

### Limitation of Implied Warranties

ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.

If you live in a state that does not allow limitations on how long an implied warranty lasts, the above limitation may not apply to you.

### Exclusion of Damages

BUDDA'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT, AT BUDDA'S OPTION. IF WE ELECT TO REPLACE THE PRODUCT, THE REPLACEMENT MAY BE A RECONDITIONED UNIT. BUDDA SHALL NOT BE LIABLE FOR DAMAGES BASED ON INCONVENIENCE, LOSS OF USE, LOST PROFITS, LOST SAVINGS, DAMAGE TO ANY OTHER EQUIPMENT OR OTHER ITEMS AT THE SITE OF USE, OR ANY OTHER DAMAGES WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, EVEN IF BUDDA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

If you live in a state that does not allow the exclusion or limitation of incidental or consequential damages, the above exclusion or limitation may not apply to you.

If you have any questions about this warranty or service received or if you need assistance in locating an Authorized Service Center, contact the Budda International Service Center at (877) 612-8332.

*Warranty conditions subject to change without notice.*



Logo referenced in Directive 2002/96/EC Annex IV  
(OJ(L)37/38,13.02.03 and defined in EN 50419: 2005  
The bar is the symbol for marking of new waste and  
is applied only to equipment manufactured after  
13 August 2005



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*Features and specifications are subject to change without notice*

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# Budda Amplification Warranty Card

**Give us some information and put your warranty into effect!**

Please take a few minutes to fill out this warranty card to help us get to know and serve you better.

**To save time, submit your warranty registration online at [budda.com](http://budda.com)  
click on resources / product registration**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Product Purchased: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchased From: \_\_\_\_\_

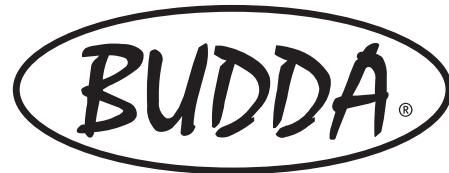
Quality of service where purchased: \_\_\_\_\_

How did you become aware of Budda?

Store     Friend     Mailer  
 Ad     Web Site

Improvements or suggestions of Budda products: \_\_\_\_\_

**For customer service please call: Toll Free (877) 612-8332.  
M-F, 8-5 p.m. Central time or email us at:  
[sales@budda.com](mailto:sales@budda.com)**



**Thank you for taking the time to fill out our survey! Don't forget to fold and tape  
(with Budda address facing out), affix postage stamp and drop in the mail!**



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13 August 2005

**FROM:**

Budda Amplification  
412 Hwy. 11/80 East  
Meridian, MS 39301

