



## NUX MG-20 Guitar Modeling Processor User Manual

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### NUX MG-20 Guitar Modeling Processor



***Thank you for purchasing the NUX MG-20 Guitar Modeling Processor!***

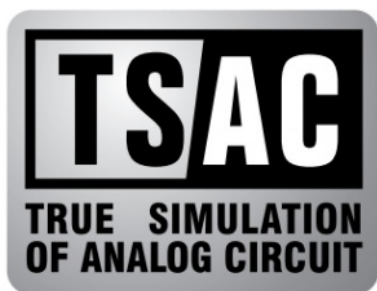
*MG-20 is one of the easiest guitar modeling processors. If you are familiar with traditional guitar rig, you may have known how to set tones in MG-20. It is also very convenient for live performance! From the panel, you can always see what effects are in the chain. To turn on and off effect modules or to assign functions to the CTRL switch and Expression pedal are quick and easy! We won't let you lose a beat!*

*In MG-20, NUX has brought the original TSAC Technology to a new level! It is equipped with 32bit float point DSP. The new algorithm nails every detail of the classic amps and effects. More than 60 effect models, plus various output modes, no matter what style you play, you'll have great tone on tap!*

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## What is TSAC?



**TSAC** (True Simulation of Analog Circuit) Since 1950's, musicians have been using analog devices to create their works. Musicians love the tone of their vintage instruments! The audio signal goes through various electronic components, such as resistors, capacitors, transistors and tubes. All these components affect each other to create the result-TONE! TSAC Technology virtually re-constructs the real analog circuits by using DSP chips, and accurately emulates the tone and feel of the vintage instruments!

## Features

- Large 2.4 Inches Color TFT LCD e CTRL Footswitch
- Drum Machine and Looper
- More than 60 Models
- Built-in Tuner
- 36 Factory Presets and 36 User Presets
- Effects Module Buttons for Quick Tone Editing
- Various Output Modes
- Expression Pedal
- USB for System Updating

## Copyright

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## Accuracy

Whilst every effort has been made to ensure the accuracy and content of this manual, Cherub Technology Co. makes no representations or warranties regarding the contents.

## WARNING!-IMPORTANT SAFETY INSTRUCTIONS BEFORE CONNECTING, READ INSTRUCTIONS

**WARNING:** To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture

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

**CAUTION:** This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of 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



The lightning symbol within a triangle means “electrical caution!” It indicates the presence of information about operating voltage and potential risks of electrical shock.



The exclamation point within a triangle means “caution!” Please read the information next to all caution signs.

1. Use only the supplied power supply or power cord. Using other power supply may cause noise or even damage!
2. Do not place near heat sources, such as radiators, heat registers, or appliances which produce heat.
3. Guard against objects or liquids entering the enclosure.
4. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.
5. Refer all servicing to qualified service personnel.

Service is required when the apparatus has been damaged in any way, such as when the 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.

6. The power supply cord should be unplugged when the unit is to be unused for long periods of time.
7. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and at the point where they exit from the apparatus.
8. Prolonged listening at high volume levels may cause irreparable hearing loss and/or damage. Always be sure

to practice “safe listening”.

**Follow all instructions and heed all warnings  
KEEP THESE INSTRUCTIONS!**

## **Front Panel Description**

### **1. SELECT knob**

Select effects, pages of presets, etc.

### **2. DISPLAY**

It displays presets, effect control panels, drum & looper interface, and other setting pages.

### **3. EDIT/SAVE button**

Press this button to enter Edit Mode and save presets.

### **4. HOME button**

Press this button anytime to return to Preset Mode.

### **5. PARAMETER knobs**

Use these knobs to set parameters of effects.

### **6. EFFECTS MODULE BUTTONS**

This series of buttons are designed as the real guitar effects signal chain. Under Edit Mode, press any of these buttons to enter an effect module

### **7. PRESET footswitches**

Use these two switches to switch presets. Press both switches simultaneously to enter DRUM & LOOP interface.

### **8. CTRL footswitch**

This is a control pedal that can be set as switch for effects On/Off, volume boost, MP3 Play/Stop or TAP tempo pedal.

### **9. EXPNOL pedal**

This pedal works as a Volume pedal or an Expression pedal to control other parameters. i.e. Wah, Whammy, Modulation Speed etc.

### **10. MASTER LEVEL knob**

This controls the master output volume of MG-20.

### **11. GROUP buttons**

Use these two buttons to quickly switch bank number under Preset Mode.

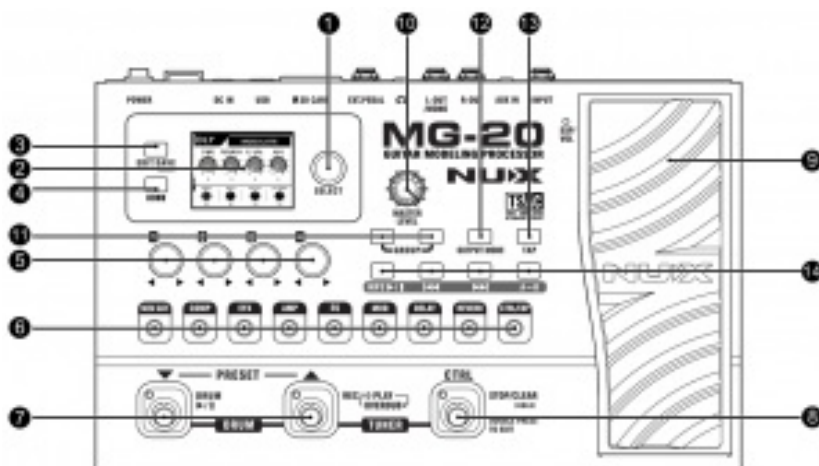
### **12. OUTPUT MODE button**

Press this any time to choose the device that you want to output the sound of MG-20 to. Choosing the right output mode helps to get better tone.

### **13. TAP button**

Use this button to tap in the speed of modulation effects, delay, and drum tempo.

### **14. MP3 buttons**



## Connection Panel Description

### 1. INPUT

Connect your guitar here.

### 2. AUXIN

Plug in your music player or drum machine here. The sound will be played through MG-20's outputs.

### 3. R-OUT & L-OUT/MONO

These are the main outputs that can be connected to amplifiers or mixer. Connect two amplifiers or for stereo effects. Use the L-OUT/MONO for mono effects.

### 4. HEADPHONES jack

This is a stereo jack for headphones.

### 5. EXT. PEDAL jack

You can plug an optional Cherub WTB-004 pedal to this jack to switch preset banks.

### 6. SD CARD slot

You can insert an SD card and play the music from the SD card by the built-in MP3 Player of MG-20.

### 7. USB jack

This is for system updating.

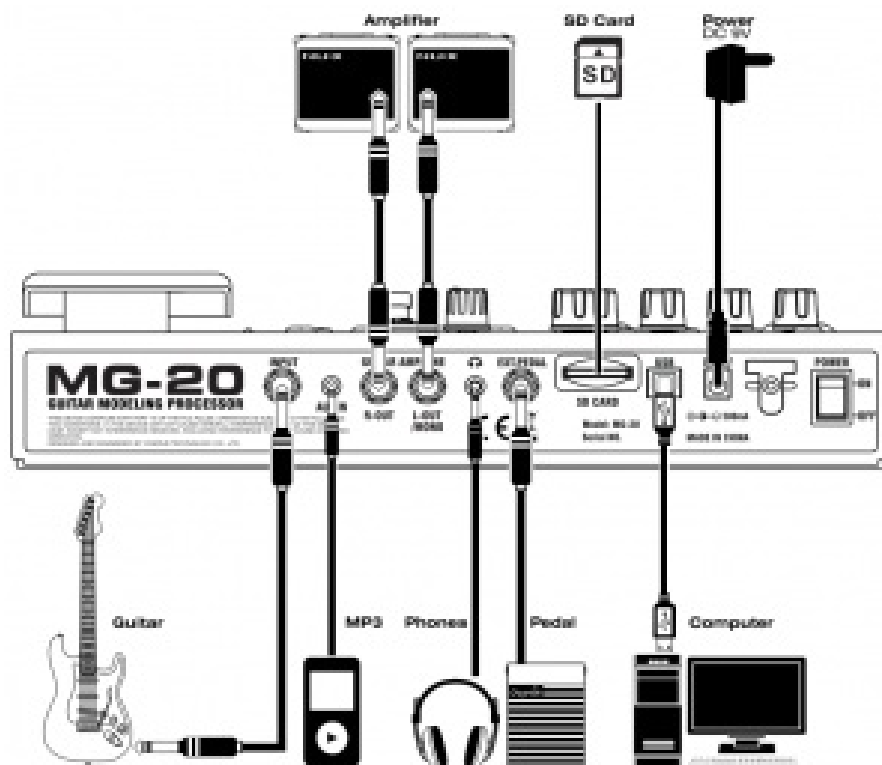
### 8. DC jack

Plug the supplied Power Adaptor in this jack.

**NOTE:** Use ONLY the supplied adaptor or optional NUX ACD-008 Adaptor. Using other adaptor may cause noise or damage!

### 9. POWER switch

Turn on and off the power of MG-20 by this switch.



## Preset Mode & Edit Mode

The default mode when you turn on the power of MG-20 is Preset Mode. Press **EDIT/SAVE** button enters Edit Mode. You can edit tones and save as user presets.

Press **HOME** button any time will return to Preset Mode.



## To Create Tones

Editing tones on MG-20 is as easy as setting normal stomp-boxes!

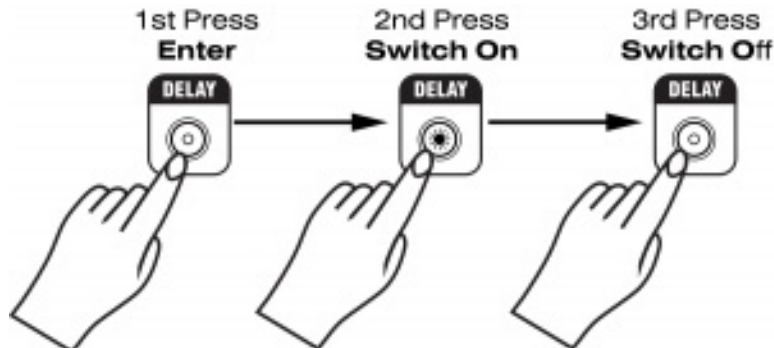
### Enter Edit Mode and Edit Effect Modules

Press **EDIT/SAVE** to enter Edit Mode.

MG-20 utilizes 9 **Effects Module Buttons** to show the guitar signal chain. Under Edit Mode, press any of these buttons once to enter corresponding effects module. Press this button again can switch this module on and the LED on the button is ON, the third press switches off this module and the LED on the button is OFF.



## Effects Module Buttons



## Modulation Effects Position

The default position of MOD module (modulation effects) is behind EQ module. You can change the position of MOD to be before EFX.

Press and hold MOD button for 2 sec to change position. When MOD is positioned before **EFX**, The **LED** on the **MOD** button will be blinking when the **MOD** module is turned on.



**NOTE:** Stereo effects are not available when MOD is before EFX. MOD position will be saved to presets.

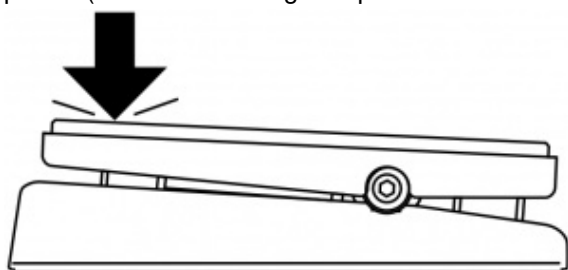
## CTRL/EXP Pedal Function Setting

MG-20 has a CTRL control pedal and an EXPNOL pedal that give you superb control on stage!



CTRL Functions List	
<b>1.SWITCH</b>	<p>Set the CTRL as a footswitch to switch On/Off one of these effect modules: COMP , EFX, AMP, EQ, MOD, DELAY, REVERS</p> <ul style="list-style-type: none"> <li>The CTRL footswitch is smartly designed to recognize if you want it to be a latched switch or momentary switch.</li> </ul>
<b>2.TAP</b>	Set the CTRL as a TAP Tempo pedal to set MOD Speed or Delay Time.
<b>3.SOLO BOOST</b>	Set the CTRL as a solo boost switch. You can use Parameter 4 knob to set the amount you want to boost the master volume when you switch on the CTRL.
<b>4.DELAY + BOOST</b>	Use the CTRL to switch on the delay effect and boost the master volume at the same time. Boost amount can be set.
<b>5.MP3 PLAY/STOP</b>	Set the CTRL as a PLAY/STOP switch of the built-in MP3 Player.

Press the toe position of the EXPNOL pedal down with a little force to switch it to be Volume pedal or Expression pedal. (The EXP LED lights up when it becomes Expression pedal)



EXP Functions List	
<b>1.WAH STANDARD</b>	Set the expression pedal to be a standard Wah pedal.
<b>2.WAHQ</b>	Set the expression pedal to be a Wah pedal that you can set the Q value and sweeping range. Experience these settings to find your favorite Wah sound.
<b>3.WHAMMY</b>	Set the expression pedal to have pitch bending effect.
<b>4.PARAMETER</b>	Set the expression pedal to control these parameters: EFX DRIVE, AMP GAIN, MOD RATE, DELAY TIME
<b>5.MIN VOLUME</b>	Set the minimum volume when you stomp the pedal to totally heel down position.

**NOTE:** The function and On/Off status of the CTRL switch and EXPNOL pedal will be saved to presets.

## To Save User Presets



Once you find the tone you like, you can save it as a user preset.

- Press and hold **EDIT/SAVE** button to enter Name Editing page.
- Use **SELECT** knob or **PRESET** ▼ ▲ footswitches to choose the preset number where you want to save to.  
Or, use the **GROUP** buttons to quickly change group number.
- Use **PARAMETER 1** and **2** to edit the preset name. Turn **PARAMETER 1** knob clockwise to start editing the next letter (left -> right); turn it counterclockwise to delete the last letter.
- Turn **PARAMETER 2** knob to choose the letters.
- Press **EDIT/SAVE** to confirm saving, or press **HOME** to abandon changes.



## To Use Presets

Under Preset Mode, you can choose presets by stomping on the **PRESET** ▼ ▲ footswitches, or tweaking the **SELECT** knob. Press the **GROUP** buttons or use an optional extension pedal to change groups quickly.

Under Preset Mode, you can still easily edit or switch On/Off any effect modules by press the **Effects Module** buttons, and change the functions of the **CTRL** pedal and **EXP** pedal. It is just like switching on or off stomp boxes on the pedal board.

You can press and hold **EDIT/SAVE** button to save the changes, or switch to another preset to abandon changes.

### Example:



This means Compressor, Amp Simulator, and Delay are turned On and in the signal chain. Others are Off.

## Output Mode

You can output the sound from MG-20 to a variety of devices by selecting output modes. Using the right output mode helps you get the best tone from MG-20.

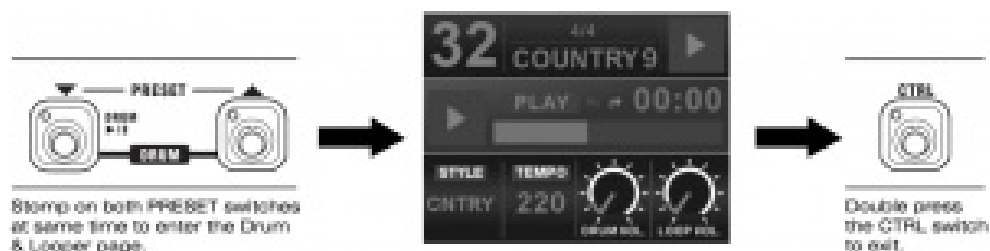
Press **OUTPUT MODE** button, and use **SELECT** knob to select the device you want to output the sound from MG-20.

<b>Stack Guitar In</b>	Choose this one when you plug the MG-20 to the Guitar Input of a stack.
<b>Stack Power</b>	Choose this one when you plug the MG-20 to the power amp of a stack. (Normally the RETURN of the FX Loop)
<b>Combo Guitar In</b>	Choose this one when you plug the MG-20 to the Guitar Input of a combo.
<b>Combo Power</b>	Choose this one when you plug the MG-20 to the power amp of a combo. (Normally the RETURN of the FX Loop)
<b>Mixer Out</b>	Output the sound from MG-20 to a mixer or PA system. MG-20's speaker simulator will be turned on.

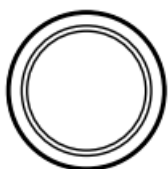
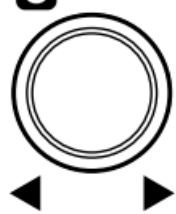




**NOTE:** Output modes can be changed at anytime. Selecting the output mode is a universal setting that is not saved in presets.

## Drum & Looper


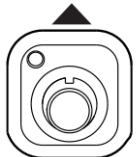

MG-20 has a built-in Drum Machine that has 81 rhythm patterns and a Looper with 60 sec recording time.



### Drum Machine

Control	Function	Control	Function
 <b>SELECT</b>	To change drum patterns	<b>3</b> 	To adjust drum volume
<b>1</b> 	To change drum styles	 <b>DRUM</b> ▶/II	Start and stop drum
<b>2</b> 	To change tempo	<b>CTRL</b> 	Double-press to exit




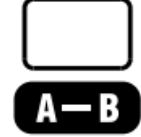
#### Looper

Control	Function
<b>4</b> 	Adjust the playback volume of a loop
 REC → PLAY OVERDUB	Press this to record, play, and overdub; Press and hold it for 2 sec to cancel the last recording (Undo), and press and hold it again for 2 sec to redo the recording that you just cancelled. (See picture)
<b>CTRL</b>  STOP/CLEAR (HOLD) DOUBLE PRESS TO EXIT	Press it once to stop the loop; Press and hold it to clear all recording; Double – press to exit (quickly press the CTRL switch twice within one second).

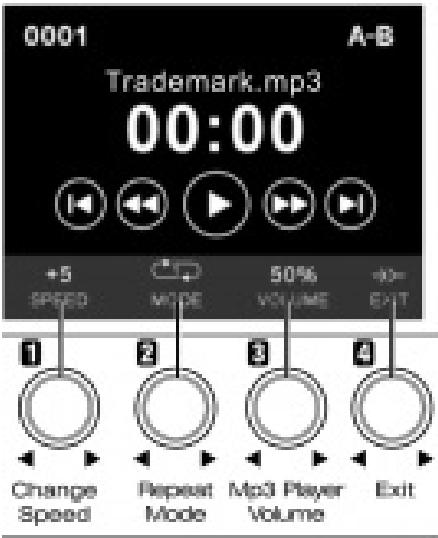
During looping, you are free to exit to **Preset Mode** or **Edit Mode** by double-press the CTRL footswitch, change the guitar tone, and return to the **Drum & Looper** page to continue looping.

Mp3 Player

MG-20 has a built-in MP3 Player that allows you to play the music from the SD card. It supports MP3 music and most of the WAV and WMA music.

	Press this to enter the interface of MP3 Player. This is also the Play/Pause button.
	Previous song.
	Next song.
	Use A-B button to repeat a phrase of music. Press once to set the start point, press the second time to set the end point, and press the third time to cancel repeating.

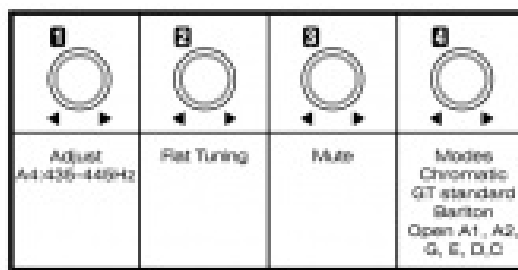
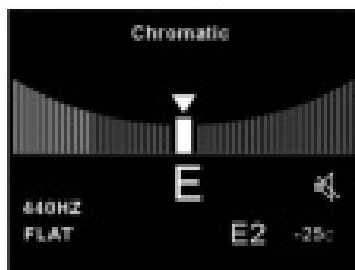
The MP3 Player also allows you to change the speed of the music without changing the key. This is helpful when you want to slow down a fast lick for learning.



**NOTE:** You can set the **CTRL** footswitch as Play/Stop switch of the built-in MP3 Player.  
  
(See: CTRL/EXP Pedal Function Setting)

Tuner

Press the **PRESET** footswitch and **CTRL** footswitch at the same time to enter tuner page.



In Tuner page, press **PRESET** ▲ footswitch for silent tuning. Press **PRESET** ▼ to change tuning modes. Quickly press **CTRL** footswitch twice in 1 second to exit.

## Facto Restore

- Press **EDIT/SAVE** button and **HOME** button at the same time to enter **SETUP** page.
- Use **SELECT** knob to select **FACTORY RESTORE**, and press **EDIT/SAVE** button to enter.
- Press one of the **GROUP** buttons to toggle to **YES**.
- Press **EDIT/SAVE** to confirm restoring and exit.

**NOTE:** All user presets and settings will be restored to factory settings


## EXP Pedal Calibration

- Press **EDIT/SAVE** button and **HOME** button at the same time to enter **SETUP** page.
- Use **SELECT** knob to select **PEDAL CALIBRATION**, and press **EDIT/SAVE** button to enter.
- Follow these steps:
  1. Set the **EXP** pedal to fully heel-down position, and press **PRESET** ▼ footswitch.
  2. Set the **EXP** pedal to fully toe-down position, and press **PRESET** ▼ footswitch.
  3. Press the **EXP** pedal towards fully toe-down position with force, the LCD will show the threshold value.  
The harder you press the pedal, the higher the value. Higher threshold value means you need to press the pedal harder to switch between Expression and Volume function of this pedal.
  4. Press **PRESET** ▼ to confirm the adjustment.
  5. If you are not satisfied with the adjustment, you can start over from step 1.
- Press **HOME** button several times to return to Preset Mode

## Language Setting, Version Information

- Press **EDIT/SAVE** button and **HOME** button at the same time to enter **SETUP** page.  
Use **SELECT** knob to select LANGUAGE SETTING, or VERSION INFORMATION.
- Press **EDIT/SAVE** button to enter.
- Follow the instruction on the screen.
- Press **HOME** several times to return to Preset Mode.

## Specifications

- **Power:** DC 9V 

- **Environment:**

- Please do NOT disassemble MG-20 by yourself.
- Please keep this manual for future reference.

- Owner's manual
- DC 9V

- *Specifications may change without notice.*

## NUX MG-20 EFFECTS LIST

[illegible]

EFX	DISTORTION +	MXR DISTORTION +	OUTPUT	DIST						
	DISTONE	BOSS DS-1	LEVEL	TONE	DRIVE					
	S. CREMER	IBANEZTS9	LEVEL	TONE	DRIVE					
	MODERN DIST	PROCO RAT	LEVEL	FILTER	DIST					
	HEAVY METAL	BOSS MT2	LEVEL	HIGH	LOW	DIST		MIDDLE	FREQ.	
	TUBE DRIVE	CHANDLER TUBE DRIVER	OUT	HI	LO	DRIVE				
	FUZZ	DUNLOP FUZZFACE	VOLUME	FUZZ						
	MUFF PI	EH MUFF PI	VOLUME	TONE	SUSTAIN					
	JAZZ CLEAN	ROLAND JAZZ 120	DRIVE	LEVEL	CABINET	MIC	BASS	MIDDLE	TREBLE	
	BLACKFACE	FENDER DELUXE REVERS	DRIVE	LEVEL	CABINET	MIC	BASS		TREBLE	
	59'TWEED	FENDER SASMAN 59	DRIVE	LEVEL	CABINET	MIC	BASS	MIDDLE	TREBLE	
	MINI TWEEED	FENDER TWEED DELUXE 5E3	DRIVE	LEVEL	CABINET	MIC		TONE		
	DELUXE VIBE	FENDER TWIN REVERS	DRIVE	LEVEL	CABINET	MIC	BASS	MIDDLE	TREBLE	
	HIGH WATT	HIWATT CUSTOM 100	DRIVE	LEVEL	CABINET	MIC	BASS	MIDDLE	TREBLE	PRES ENCE

[illegible]



[illegible]

	CONDENSER									
EQ	7-BAND EQ		100	200	400	800	1.6k	3.2k	6.4k	GAIN
	PARAMETRIC EQ		LOW GAIN	LOW MID GAIN	HIGH MID GAIN	HIGH GAIN	LOW FREQUENCY	LOW MID FREQUENCY	HIGH FREQUENCY	HIGH FREQUENCY
MODULATION	CHORUS	BOSS CE-5	E. LEVEL	DEPTH	RATE	M-S	LOW	HIGH	SUB. DIV.	TAP TEMPO
	ST. CHORUS	STEREO CHORUS	E. LEVEL	DEPTH	RATE	M-S	LOW	HIGH	SUB. DIV.	TAP TEMPO
	FLANGER	BOSS BF-3	MANUAL	DEPTH	RATE	RESO.			SUB. DIV.	TAP TEMPO
	VINTAGE PHASER	MXR PHASE 90	RATE	DEPTH					SUB. DIV.	TAP TEMPO
	U-VIBE	DUNLOP UNI-VIBE	VOLUME	INTENS.	SPEED	CHO-VIB			SUB. DIV.	TAP TEMPO
	TREMOLLO		VOLUME	INTENS.	SPEED	SLOPE			SUB. DIV.	TAP TEMPO
	ROTARY SPK		RATE	BALANCE	DIRECT	EFFECT				
	VIBRATO		SPEED	DEPTH					SUB. DIV.	TAP TEMPO
	HARMONIST		MODE	KEY	HARMONY	BALANCE				
	DETUNE		SHIFT L.	SHIFT R.	MIX	LEVEL				

[illegible]

### THE FCC REGULATION WARNING (for U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### CE mark for European Harmonized Standards

CE Mark which is attached to our company's products of Battery mains the product is in fully conformity with the harmonized standard(s) EN 61000-6-3:2007 +A1 :2011 & EN 61000-6-1 :2007 Under the Council Directive 2004/108/ EC on Electromagnetic Compatibility.



# NUX

[www.nuxefx.com](http://www.nuxefx.com)

## Documents / Resources



[NUX MG-20 Guitar Modeling Processor](#) [pdf] User Manual  
MG-20 Guitar Modeling Processor