

1 **9in** **ANALOG** **DRIVE** *by SonaMagna*



SonaMagna

USER
GUIDE

IMPORTANT! FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:

WATER AND MOISTURE: Product should not be used near water (near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

POWER SOURCES: The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product. Unplug the product during lightning storms or when unused for long periods of time.

GROUNDING OR POLARIZATION: Precautions should be taken so that the grounding or polarization means of product is not defeated.

POWER CORD PROTECTION: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

HEAT: Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

SERVICING: The user should not attempt to service the product beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

SOUND LEVELS: DO NOT operate for a long period of time at a high volume level or at a level that is uncomfortable, as hearing loss could occur.

CLEANING: Clean product using a soft, dry cloth.

LIMITED WARRANTY

Your 9 in 1 Drive pedal, when used solely in the US, is guaranteed against failure for ONE YEAR unless otherwise stated. SonaMagna will service and supply all parts at no charge to the customer providing the unit is under warranty. Shipping costs are the responsibility of the customer. SonaMagna DOES NOT PAY FOR PARTS OR SERVICING OTHER THAN OUR OWN. A COPY OF THE ORIGINAL INVOICE IS REQUIRED TO VERIFY YOUR WARRANTY. SonaMagna assumes no responsibility for horn drivers or speakers damaged by this product. This warranty does not cover, and no liability is assumed, for damage due to: natural disasters, accidents, abuse, loss of parts, lack of reasonable care, incorrect use, or failure to follow instructions. This warranty is in lieu of all other warranties, expressed or implied. No representative or person is authorized to represent or assume for SonaMagna any liability in connection with the sale or servicing of SonaMagna products. SonaMagna SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SonaMagna reserves the right to make changes in design, or make additions to, or improvements upon this product without incurring any obligation to install the same on products previously manufactured. Modifications of the product not expressly approved by SonaMagna may void this warranty.

When RETURNING merchandise, you may contact SonaMagna through the SonaMagna.com website **or email** info@sonamagna.com for a return authorization number. Describe in writing each issue. If your unit is out of warranty, you will be charged the current FLAT RATE for parts and labor to bring your unit up to factory specifications.

COMPLIANCE

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 used in accordance with the instructions, may cause harmful interference to radio communications and 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 of the receiver. Consult the dealer or an experienced radio/TV technician if help is needed with interference.

Use only shielded interconnecting cables. Modifications of the product not expressly approved by SonaMagna may void the user's authority to operate this product.

RESTRICTIONS

The FIRMWARE program is copyrighted. You may not engage in reverse engineering or reproduction of the FIRMWARE by other conceivable methods. You may not reproduce, modify, change, rent, lease, resell, or distribute the FIRMWARE in whole or in part, or create derivative works from the FIRMWARE.

DISPOSAL / TRADE IN PROGRAM

Protect the environment by not disposing of this product with household waste. Check your local authority for recycling advice and facilities. Alternatively, visit the SonaMagna website or email us at info@sonamagna.com for information about new product discounts when trading in equipment, both operational and non-operational.

Thank you for purchasing the 9 in 1 Drive by SonaMagna. To get the most out of this product, we urge you to thoroughly read this user guide before use.

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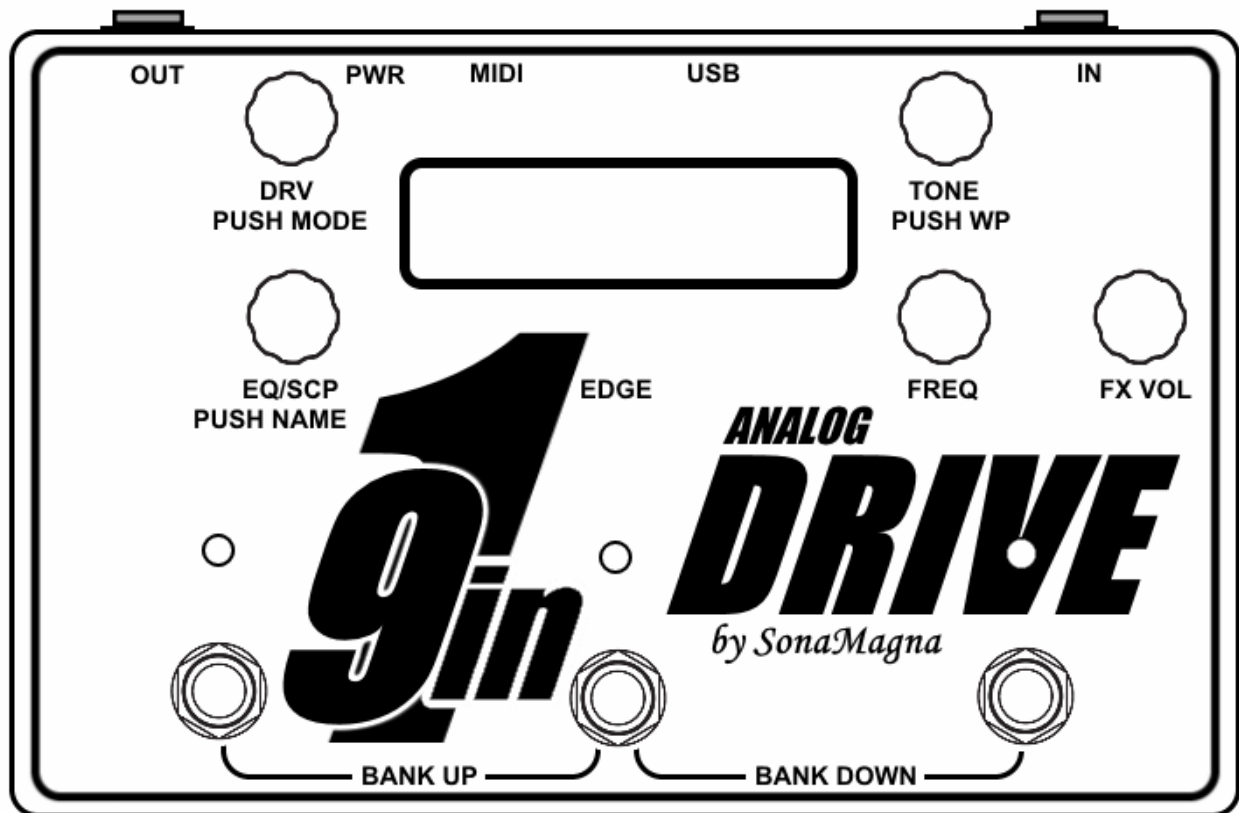
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NOTE: The information contained in this user guide is subject to change at any time without notification. Some information contained in this user guide may also be inaccurate due to undocumented changes in the product or operating system since this version of the user guide was completed. The information contained in this version of the user guide supersedes all previous versions.

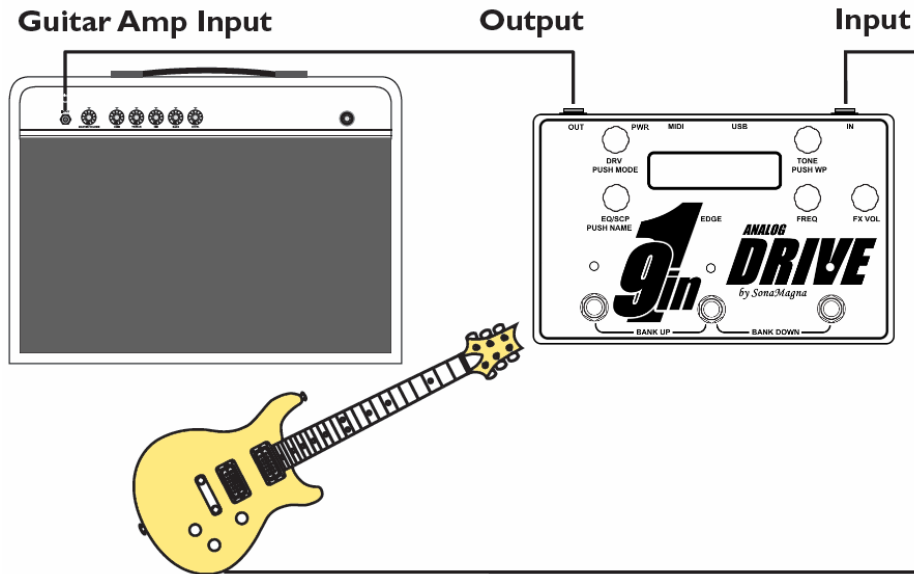
OVERVIEW

The *9 in 1 Drive* guitar pedal is a great sounding, easy to use, multi-tool of a pedal which includes overdrive, distortion, fuzz, metal distortion, metal fuzz, sweep-able EQ, adjustable mid-scoop, and clean boost effects. Its analog signal processing and innovative control setup - no "edit", "save", or "menu" buttons! - make it possible to replace multiple stomp-boxes at a fraction of the cost and space. MIDI control and USB included. *SonaMagna* pedals are built using time proven, robust techniques.



- | | |
|---|---|
| <ol style="list-style-type: none"> 1. OUT: Output jack to guitar amp. 2. PWR: 9V to 12V DC power input jack. 3. MIDI: MIDI jack. 4. USB: Full speed USB port for control firmware updates. 5. IN: Guitar input jack. 6. DRV & MODE: Sets the amount of drive gain and also acts as a button to select 6 different drive modes 7. LCD Screen: Displays information about the 9 in 1's effect presets and also changes color to indicate the current bank (Red, Green, or Blue). 8. TONE & WP: Varies the amount of high end for all drive modes except clean ("cln") mode. Pressing the TONE knob enables or disables write protect mode (WP). 9. EQ/SCP & NAME: Sets the amount of boost or cut of the EQ. In metal modes the EQ/SCP control adjusts the amount of mid scoop. Pressing the EQ/SCP control enables changes to the preset name. | <ol style="list-style-type: none"> 10. FREQ: Sets the center frequency which is boost or cut. In metal modes the FREQ control sets the pre-emphasized midrange frequency. 11. FX VOL: Adjusts the volume of drive and EQ effects for each individual preset. This control is disabled when the effects are off. 12. EDGE: Adjusts the drive clipping presence - smoother (counter-clockwise) or harder edged (clockwise). Not active when drive mode is set to "cln" or when the effects are disabled. 13. LEDs: The LEDs indicate which preset within a bank is currently active and change color to indicate the current bank (Red, Green, or Blue). If the effects are off (i.e. no preset is active) all 3 LEDs will be off. 14. FOOTSWITCHES: Press the footswitches to select a preset within a bank, or to change banks. |
|---|---|

SETUP



Plug in your guitar, amp, and power supply to the *9 IN 1 DRIVE*. The LCD will light up the color of the current bank (Red), display a quick splash screen with the firmware revision, and will then display that the effects are off and the current bank is “Red”, as shown below. When the effects are off your clean guitar sound will go through the pedal.

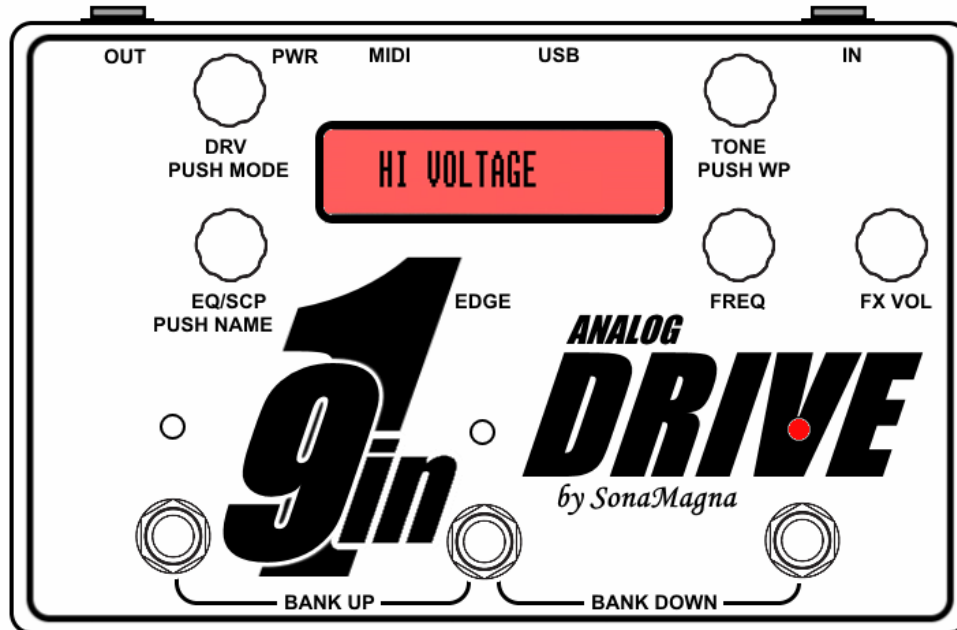


** TIP: The 9 in 1 Drive will typically work best as the first pedal in your chain. If you use other high gain drive pedals, or pedals which sound better when a guitar is plugged directly into them, place those in front of the 9 in 1 Drive.*

** TIP: When looping excess power supply cable in order to manage cabling, keep the loop away from power supply blocks (i.e. the “wall wart” part) to help reduce noise.*

PRESETS & BANKS

The *9 IN 1 DRIVE* effect presets are arranged in 3 banks of 3 presets each, providing a total of 9 tone presets in 1 pedal. To enable an effect preset, press a footswitch. The LCD will display the preset name. The LED above the pressed footswitch will light up and its color will indicate the currently selected bank.



To turn the effects off, press the footswitch corresponding to the currently active preset (i.e. press the footswitch under the lit LED). You can switch to any of the 3 presets by pressing the other footswitches.

To select another bank of 3 presets, press the left and middle footswitches (or right and middle footswitches) at the same time. Pressing both the left and middle footswitches multiple times will scroll through the banks in the following order: Red, Green, Blue (i.e. bank UP). Pressing both the right and middle footswitches multiple times will scroll through the banks in the following order: Red, Blue, Green (i.e. bank DOWN). The LCD and LEDs will change color depending on which bank is currently selected. The color coded banks and multi-color LCD make it easy to tell which bank is selected even when the effects are off.

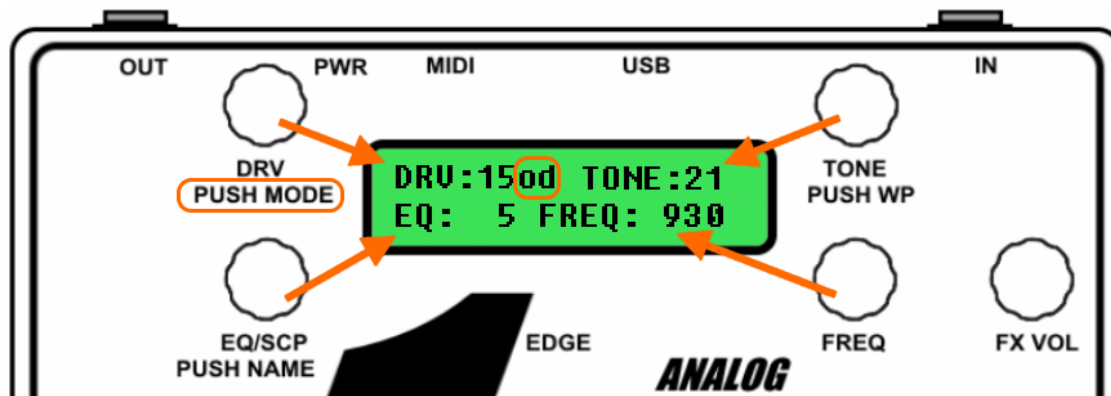
** TIP: When changing banks, the preset enabled in the newly selected bank will correspond to the first of the two footswitches pressed during the bank change.*

** TIP: Try to setup your presets so that you don't have to change banks during a song. Consider duplicating presets in more than one bank if needed.*

BASIC CONTROL SETTINGS

The *9 IN 1 DRIVE* was designed with the idea of making a programmable pedal as easy to setup as a regular stomp-box. With that in mind, you'll see there are no edit, save, or menu buttons on the pedal. Whenever a preset is active, you can change its settings by simply turning or pressing the knobs, similar to how you'd use a regular stomp-box. The LCD changes automatically to display the information. And changes are saved automatically.

The control knobs on the *9 IN 1 DRIVE* correspond to the control values displayed on the LCD. With the exception of the FX VOL control knob, each control knob is located closest to its corresponding control value shown on the LCD. To adjust a preset's control values, turn or press the knob labeled with the control setting you'd like to change. When a knob is turned, the display will show the preset's effect control setting values. The values for each effect control are shown after the control knob name. The drive mode (e.g. "od") is shown after "DRV:" and its control value. For example, to adjust the tone control value, turn the control knob labeled "TONE" and the tone value on the LCD will change as will the guitar tone. As another example, to change the drive mode, push the control knob labeled "DRV" and the drive mode shown on the LCD will change as will the drive sound.



The FX VOL control adjusts the volume of the drive and EQ effects for each individual preset. This control is disabled when the effects are off. When the FX VOL control knob is turned, the LCD will automatically update to show the FX VOL control value, and will switch back to show the other control values automatically.

** TIP: Use the FX VOL settings to adjust the relative volumes of your presets so that your guitar sits well in the mix for rhythm and lead parts. Use the master volume control on your amp to control your overall volume level.*

Pressing the TONE knob enables or disables write protect mode (WP). Enable write protect mode to preserve the control values of your presets. When WP is active, temporary changes to the control values can be made but are not saved. The letters "wp" will appear at the right side of the LCD when write protect mode is enabled. WP mode is enabled on power up by default. Additionally, all the knobs have detents to keep them from turning while you're playing.



** TIP: While write protect mode is enabled you can experiment with changes to the effect control values without over-writing your current preset values. If you like the changes you made, disabling then enabling write protect mode will save those changes to the current preset.*

DRIVE MODES & EQ

The DRV control knob sets the amount of drive gain. The DRV knob also acts as a button and can be pressed to toggle through 6 different drive modes: clean mode “cln”, overdrive mode “od”, distortion mode “ds”, fuzz mode “fz”, metal distortion mode “md”, and metal fuzz mode “mf”. To change the amount of drive, turn the DRV knob and the LCD will update the values as they are changed and the guitar’s drive will increase. To scroll through the 6 different drive modes, press the DRV knob multiple times.

The TONE control knob varies the amount of high frequencies for the drive modes except when the drive mode is set to clean (“cln”). When the drive mode is set to clean, the display will show “cln” for the DRV mode and “na” for the TONE value, as shown in the example display below.



** TIP: When using overdrive (“od”) or distortion (“ds”) modes, try rolling back the volume control on your guitar to clean up the guitar sound without having to change presets or disable the effect.*

The EQ/SCP control knob sets the amount of boost or cut of the EQ. The FREQ control knob sets the center frequency which is boost or cut, and is adjustable over a wide frequency range. These controls provide powerful tone shaping which can be helpful to getting focused tones.

In metal modes the EQ/SCP control adjusts the amount of midrange scoop (increasing scoop boosts highs and lows) and the display will show “SCP:” (scoop) in place of “EQ:”. In metal modes the FREQ control sets a pre-emphasized midrange frequency, so you can get different variations of metal style tones.



Use the EDGE control to adjust the presence of your drive tones. The EDGE control can affect how your guitar sound sits in the mix with other instruments. This control is applied to all 9 presets (i.e. it is a global control). It is not active when the drive mode is set to clean (“cln”) or when the effects are disabled.

** TIP: Start with the EDGE control set to 12 o’clock and use the TONE control to adjust the smoothness of the drive sound for each of your presets (higher TONE values produce a brighter, more aggressive sounding drive tone, lower TONE values produce smoother, mellower sounding drive tones). Turning the EDGE control clockwise can help your drive tones cut through a mix when playing along with other instruments.*

PRESET NAME

Each preset in the *9 IN 1 DRIVE* can be given a unique name to help you remember what type of tone the preset is setup for. When a preset is active, pressing the EQ control knob changes the LCD so that you can modify the preset name. Turn the EQ/SCP control knob to select different letters or characters at the underlined cursor location, then press the EQ/SCP control knob to advance the character selection. 12 characters may be used in the preset name. When the EQ/SCP control knob is pressed after the 12th character has been selected, the name is saved (even if write protect is enabled) and then displayed on the LCD. Pressing any footswitch while changing a preset name will exit "Preset Name Change" mode without saving changes.



Preset Name Change:
BASIC DRIVE

NOTE: The LCD and preset LEDs will automatically turn off any colored lights after about 15 minutes if no foot-switches, knobs, or buttons have been pressed. Your guitar signal will continue to have drive effects applied if the effects are enabled. Pressing a foot-switch or button, or turning a knob will turn the lights back on again.

LOAD FACTORY PRESETS

WARNING: performing these steps will erase any custom presets which may be saved in your *9 IN 1 DRIVE* unit. To load the factory default presets, remove power from the unit then power it back up. When the splash screen with the firmware revision is displayed, press and hold the middle footswitch. Press the left footswitch to load the factory default presets. Press the right footswitch to keep your present settings.

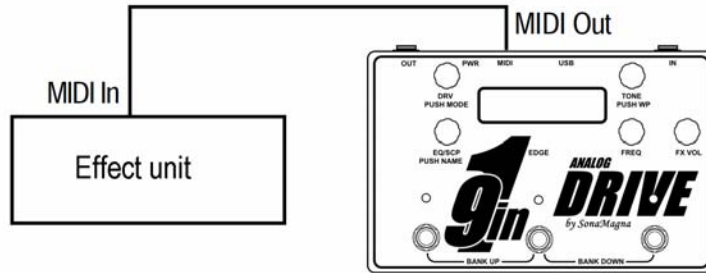


Ld Factory Presets?
Yes(left) No(right)

USING MIDI

USING MIDI TO CONTROL ANOTHER EFFECT UNIT:

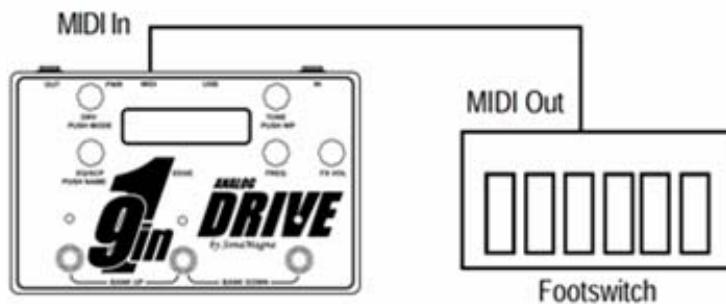
The MIDI jack on the *9 IN 1 DRIVE* is normally configured as MIDI OUT. Connect a MIDI cable from the *9 IN 1 DRIVE*'s MIDI jack to the MIDI IN jack of the effect unit you'd like to control. Plug the power cable into your *9 IN 1 DRIVE*. Set the MIDI channel of the effect unit you'd like to control to channel 9. A MIDI program change message is sent when a footswitch on the *9 IN 1 DRIVE* is pressed. A program value of "0" is sent when the effects are disabled and program values of "1" thru "9" are sent when presets are activated.



USING MIDI TO ALLOW ANOTHER EFFECT UNIT TO CONTROL THE *9 IN 1 DRIVE*:

NOTE: MIDI IN is available as a custom option. If your *9 IN 1 DRIVE* is configured with MIDI IN, the letters "IN" will appear at the end of the serial number on the back of the unit.

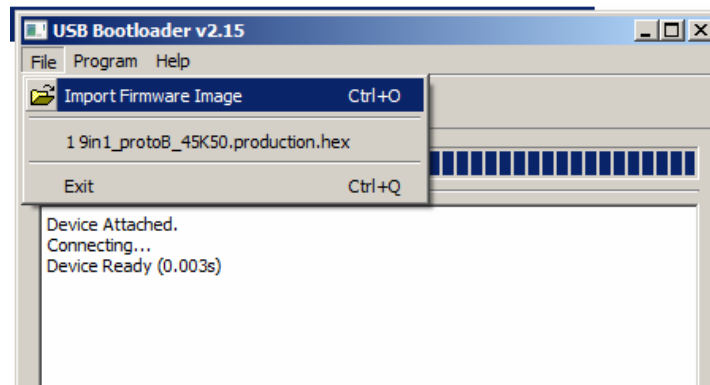
Connect a MIDI cable from the *9 IN 1 DRIVE*'s MIDI jack to the MIDI OUT jack of the effect unit which will control the *9 IN 1 DRIVE*. Plug the power cable into your *9 IN 1 DRIVE*. Set the MIDI channel of the effect unit which will control the *9 IN 1 DRIVE* to channel 9. MIDI program change messages with values of "0" or values greater than "9" will disable the effects on the *9 IN 1 DRIVE*. Program change values from "1" through "9" will activate the different presets of the *9 IN 1 DRIVE*.



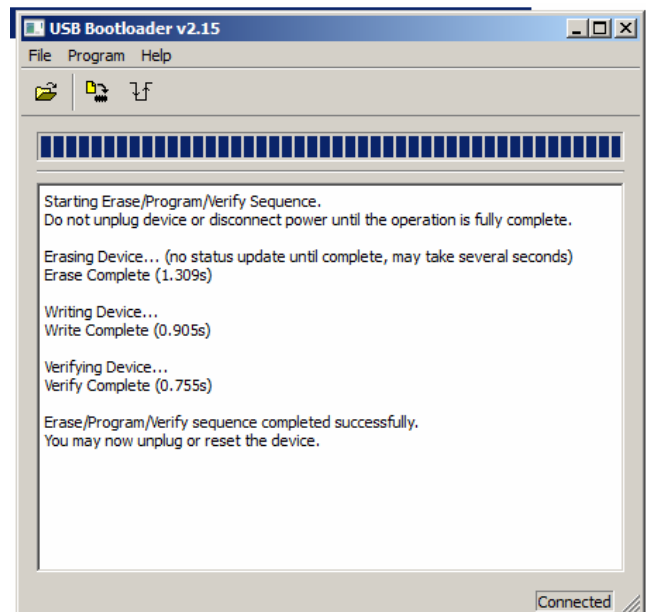
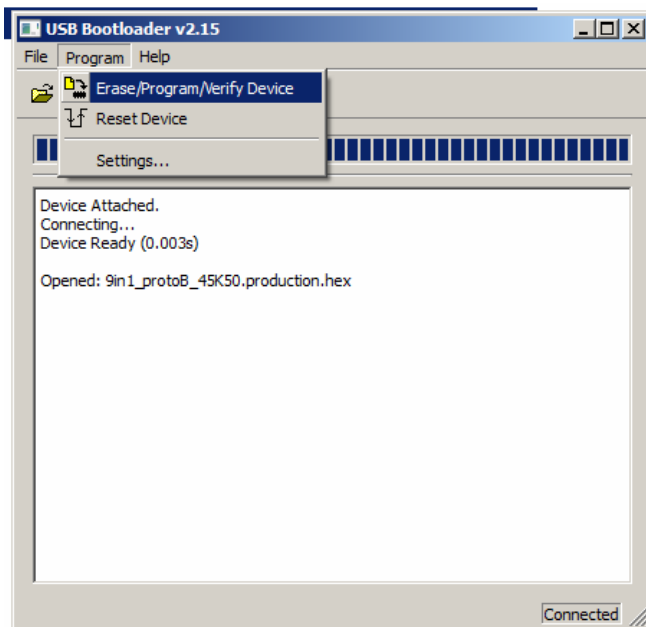
UPDATE FIRMWARE

WARNING: performing these steps will erase any custom presets which may be saved in your 9 IN 1 DRIVE unit. A PC running Win7 is required to update firmware. Check your pedal's splash screen for its current version of firmware and check the sonamagna.com website to see if a newer version is available. To update the control firmware, perform the following steps:

1. Download the latest firmware .hex file from the SonaMagna.com website.
2. Download the USB_bootloader ZIP file from the SonaMagna.com website and unzip the files. Double click "9in1_Drive_bootloader.bat" to start the program.
3. Remove power from the 9 IN 1 DRIVE.
4. Plug a USB cable into the PC and into the USB port of the 9 IN 1 DRIVE.
5. Press the DRV knob and power the 9 IN 1 DRIVE back up while keeping the DRV knob pressed.
6. Click "File | Import Firmware Image" and select the new firmware file (e.g. "9in1_prodA.hex").



7. Click "Program | Erase/Program/Verify Device".
8. Make sure the program verifies the download ok ("Verify Complete").



9. Unplug the USB cable and power from the 9 IN 1 DRIVE
10. Power the 9 IN 1 DRIVE back on and load the factory defaults if desired.

SPECIFICATIONS

EFFECT CONTROL VALUE RANGES

Control	Range	Notes
DRV (knob)	1 to 32	1=min distortion, 32=max distortion (can get loud!)
DRV MODE (button)	Mode "cln", mode "od", mode "ds", mode "fz", mode "md", mode "mf"	Toggles through clean, overdrive, distortion, fuzz, metal distortion, and metal fuzz modes
TONE	1 to 32	1=max high cut (mellower tone), 32=no high cut (edgier tone) - - not active when DRV mode is set to "cln" mode
WP (TONE button)	Enabled or disabled	Control value changes (except preset name) are not saved when write protect mode is enabled
EQ	-11 to 20	-11=max cut, 0=no cut or boost, 20=max boost
SCP (metal modes)	1 to 32	1=min amount of mid scoop, 32=max amount of mid scoop (highs and lows boosted)
NAME (EQ button)	Characters A thru Z plus some non-alpha	Preset name can be up to 12 characters long
FREQ	200 to 4000 Hz	varies in steps
FX VOL	-40 to 23	-40=min volume, 0=same volume as with effects off (only when drive is set to "cln" mode), 23=max volume
MIDI Program Changes (sent/received)	0 to 9	Program changes are sent/received on MIDI channel "9". Program value "0" is sent when effects are off. Program values "1", "2", or "3" are sent when presets in bank Red are selected; "4", "5", or "6" for bank Green; "7", "8", or "9" for bank Blue. Received program change values activate the corresponding presets as detailed above if your unit is configured for MIDI IN.

ELECTRICAL SPECIFICATIONS

Power Supply:	+9V to +12V dc @ 60mA
Frequency Response:	250 Hz to 10 KHz (drive enabled); 20 Hz to 20 KHz (effects off or drive "cln")
Input Impedance:	500 Kohms
Output Impedance:	150 - 500 ohms
Sweep-able EQ Range:	variable from 200 Hz to 4 KHz
Sweep-able EQ Cut/Boost:	variable from -10 dB to +15 dB
Metal SCP Frequencies:	110 Hz, 5 KHz
Metal SCP Boost:	variable from 0 dB to +10 dB
Clean Boost:	variable from 0 dB to +10 dB

FACTORY PRESET VALUES

BANK: Red

PRESET LEFT			
Name: MASS CITY			
Description:			
DRV: 22	TONE: 24	FX VOL: -13	
MODE: ds			
EQ/SCP: 18	FREQ: 850		

PRESET MIDDLE			
Name: METAL BLUES			
Description:			
DRV: 27	TONE: 18	FX VOL: -12	
MODE: md			
EQ/SCP: 8	FREQ: 600		

PRESET RIGHT			
Name: HI VOLTAGE			
Description:			
DRV: 29	TONE: 21	FX VOL: -16	
MODE: md			
EQ/SCP: 19	FREQ: 930		

BANK: Green

PRESET LEFT			
Name: VIOLIN TONE			
Description:			
DRV: 17	TONE: 21	FX VOL: -8	
MODE: fz			
EQ/SCP: 14	FREQ: 560		

PRESET MIDDLE			
Name: --WALL----			
Description:			
DRV: 11	TONE: 27	FX VOL: -10	
MODE: fz			
EQ/SCP: 10	FREQ: 700		

PRESET RIGHT			
Name: ROYALTY			
Description:			
DRV: 30	TONE: 25	FX VOL: -12	
MODE: od			
EQ/SCP: 19	FREQ: 740		

BANK: Blue

PRESET LEFT			
Name: STAIRWAY			
Description:			
DRV: 13	TONE: 25	FX VOL: -8	
MODE: od			
EQ/SCP: 14	FREQ: 450		

PRESET MIDDLE			
Name: TEXAS BLUES			
Description:			
DRV: 9	TONE: 21	FX VOL: -8	
MODE: ds			
EQ/SCP: -8	FREQ: 290		

PRESET RIGHT			
Name: LATIN FLAVOR			
Description:			
DRV: 13	TONE: 21	FX VOL: -10	
MODE: ds			
EQ/SCP: 12	FREQ: 390		

CUSTOM PRESET VALUES

BANK: Red

PRESET LEFT			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

PRESET MIDDLE			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

PRESET RIGHT			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

BANK: Green

PRESET LEFT			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

PRESET MIDDLE			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

PRESET RIGHT			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

BANK: Blue

PRESET LEFT			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

PRESET MIDDLE			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

PRESET RIGHT			
Name:			
Description:			
DRV:	TONE:	FX VOL:	
MODE:			
EQ/SCP:	FREQ:		

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9 in 1 Drive patent pending: Application Number 62505352