

VFX



## OWNER'S MANUAL

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# IMPORTANT SAFETY INFORMATION

We want you to be aware of certain safety aspects, for reasons of product **safety** and **liability**. With all due respect, please read the following **before** operating your new Diezel VHX.

- **DO NOT** use or store the device in or near **moist** or **wet** areas.
- **Check voltage** specification at rear of unit before plugging unit in. Make sure that voltage shown is the correct voltage for the location you are using the device at. Under no circumstances can the amplifier be used at different than shown voltages.
- **DO NOT OPEN** the device housing. It must only be done by authorized personnel. Your VHX operates on **very high internal voltages**, which may still be present after the device has been turned off and disconnected for a while. No user serviceable parts inside
- The VHX was designed to amplify a guitar signal and can be used only for this purpose.
- When transporting the VHX please observe the following: The Diezel VHX is a vacuum tube instrument amplifier. Vacuum tubes are shock sensitive, especially when hot. To avoid damaging the unit, we recommend using care during setup and tear down of the unit. Allow the Amplifier to adjust to ambient temperature before operating, 60 minutes should be enough in all cases. The VHX lives inside an extremely rugged chassis, but for continued road use, please protect the amplifier by using a professional flight case. Transport only in operating position. Do not transport upside down or on its side.
- The Diezel VHX is configured to deliver highest tone fidelity at “normal volume levels (76 - 80dB). We caution you for your own good not to expose yourself to very high-volume levels for long periods of time. It can lead to hearing damage.
- **Blown fuses can only be replaced with fuses of equal values.** The use of incorrect fuses is prohibited and can cause severe injury and damage of the amplifier.
- Use only a **grounded power cable** in good operating condition.



## 25 YEARS LATER, SETS A NEW BENCHMARK IN TUBE GUITAR AMPLIFICATION. AGAIN.

**VHX** is the answer of the evolving needs of the guitar player. The unique combination of the distinctive, irreplaceable fully programmable and fully analog tube preamp and power amp, with a fresh, simple and intuitive UI opens a world of infinite possibilities with no TONE compromise.

**That's what the X stands for. Defining it it's left to you.**

### SPECIFICATION

- 100W 4 x KT77, 5 x 12ax7 Class AB Guitar Head
- **Includes** Diezel iconic channels from **VH4, Hagen, Herbert** and more...
- **Fully** digitally **programmable** controls: **Gain, Channel, Bright, Shape, Voice, Middle, Treble, Bass, Midcut, Volume, Presence, Deep**
- Switchable Pre Loop
- 2 x Switchable FX Loop with independent programmable Send/Return Levels and Mix
- XLR Balanced **IR Cabsim** Record Out
- Headphones **IR Cabsim** Record Out
- **Cableless** operation
- Automatic chromatic **Tuner**
- Up to 7 simultaneous fully programmable effects
- **Columbus MIDI** support
- **Bluetooth Low Energy MIDI-BLE** support
- **USB** support
- **DOS 1.5** effects list: **IR Cabsim, Noise Gate, Compressor, Quad/Polyphonic Pitch Shifter, Delay, Chorus, Flanger, Phaser, Reverb, Tremolo, GEQ**
- No engineering degree required to operate the device :)



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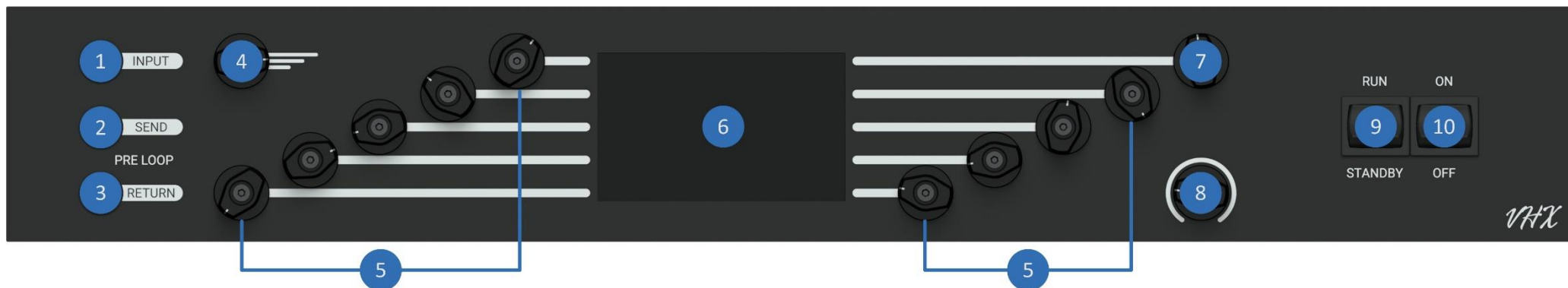
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## FRONT PANEL

**1 INPUT** Connect your guitar here through a good quality ¼" Instrument cable.

**2 PRE LOOP SEND** Pre Loop SEND (output). Connect here the input of one or a chain of effects. PRE LOOP is internally wired before the PREAMP.

**3 PRE LOOP RETURN** Pre Loop RETURN (input). Connect here the output of the same effects used from PRE LOOP SEND. PRE LOOP is internally wired before the preamp.

**4 PRESET MANAGER** Rotate the encoder to scroll between all the available presets, from 1 to 99. Push to open Preset Manager.

**5 ENCODERS** This group of encoders will let you edit, by **rotating**, **pressing**, or **holding** the relative function shown on DISPLAY. Follow the lines.

**6 DISPLAY** This is the Display where all the parameters will be visualized. Each encoder will control the respective parameter on display, follow the lines.

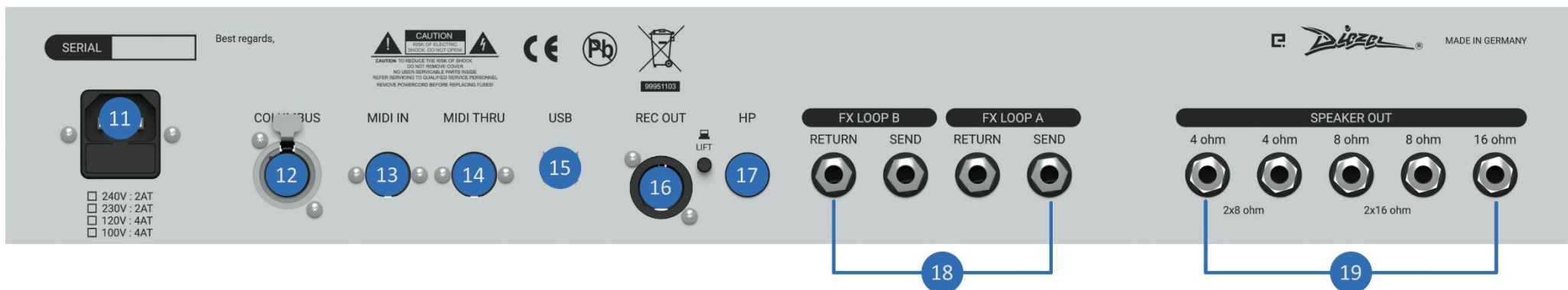
**7 SCREEN MANAGER / MUTE** Rotate the encoder to scroll between all the available screens. Push the encoder to **MUTE** or **UNMUTE** the POWER AMP so connected cabinets. POWER AMP cannot be UNMUTED if no cabinet is connected.

**8 MASTER VOLUME** This is the POWER AMP Master Volume, it only affects POWER AMP so connected cabinets.

**9 STANDBY SWITCH** Make sure the switch is on STANDBY mode before powering on the VHX. Let the tube warm up for at least 40 seconds.

**10 POWER SWITCH** Make sure STANDBY is set to OFF before powering ON the VHX. Before powering OFF the VHX set STANDBY switch OFF and wait at least 30 second to avoid POWER AMP bump.





## REAR PANEL

**11 AC IN** Connect to a **PROPERLY GROUNDED** AC power outlet. Make sure the voltage shown matches with the location you are using VHX in.

**12 COLUMBUS** Connect your COLUMBUS controller here.

**13 MIDI IN** Connect your MIDI controller here. Please note that PHANTOM POWER is available at **9V DC** on pin 1-6 (-) and 3-7 (+) with a maximum **500mA** current.

**14 MIDI THRU** Connect other chained MIDI devices here.

**15 USB** Connect with a PC for updates and presets backup. Avoid using USB HUB for reliable operation.

**16 REC OUT** This is the CAB SIM Balanced XLR output. It could be used in parallel to HEADPHONES and POWER AMP. Adjust LEVEL and other settings trough the CAB SIM screen. If you are experiencing GROUND

LOOP or HUM, you could use the **LIFT** push button. AVOID connection with 48V PHANTOM POWER enabled device.

**17 HEADPHONES** Connect your headphones here. This output could be used in parallel to XLR REC OUT and POWER AMP. Adjust LEVEL and other settings trough the CAB SIM screen.

**18 FX LOOP A/B** Connect your effects chain here. FX LOOP A and FX LOOP B are completely independent and wired after the PREAMP and could be placed anywhere in the integrated DSP EFFECT chain. Each one has independent SEND, RETURN and MIX level adjustments, controlled trough FX LOOP A/B effect screen section.






**19 SPEAKER OUT** Connect your CABINET(s) here. Make sure that the IMPEDANCE of the CABINET(s) matches the one shown on the relative output jack.

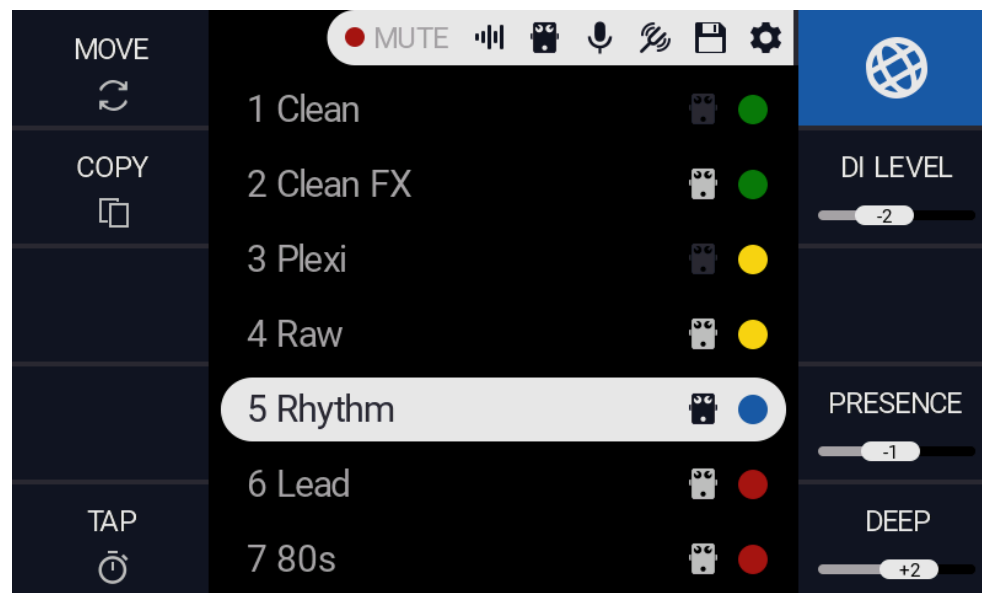


# DISPLAY

The display is the heart of the VHX. It has been developed to give as much as possible the feel and the simplicity of an analog UI.

Starting from the top, the navigation bar will display the **POWER AMP MUTE STATUS** and the current **SCREEN**:

-  **PREAMP**
-  **FX**
-  **RECORD**
-  **TUNER**
-  **STORE**
-  **SETTINGS**



The SIDES display the parameters relative to the current screen, and could be edited by **rotating**, **pushing** or **holding** the relative ENCODER.

To open the **PRESET MANAGER**, push the preset knob. Preset Manager would give an overview of all the current presets, with the gain and effects associated with. It would be possible to select, move and copy/paste the presets to arrange them easily.

The PRESET MANAGER screen allow GLOBAL DEEP, GLOBAL PRESENCE, GLOBAL LEVEL and GLOBAL TAP to be edited. The parameters are relative to the PER PRESET ones, where the value “0” means no change.



# PREAMP

The VHX preamp is the result of 25 years of constant development and innovation, and it brings you all the **ICONIC** Diezel tones from the amps everybody's in love with: VH4, Herbert, Hagen, Paul and more...

**GAIN** Rotate the relative encoder to select the amount of gain.

**GAIN STRUCTURE** Push the GAIN encoder to scroll between all the available configurations: **GREEN**, **YELLOW**, **BLUE** and **RED**.

**BRIGHT** (For GREEN and YELLOW) Rotate the relative encoder to toggle bright mode.

**SHAPE** (For BLUE and RED) Rotate the relative encoder to scroll between all the shape mode. Shape control will morph the relative gain structure, from **TIGHT** to **FAT**.

**VOICE (VINTAGE/CLASSIC/MODERN)** Push the SHAPE encoder to scroll between the available voices.

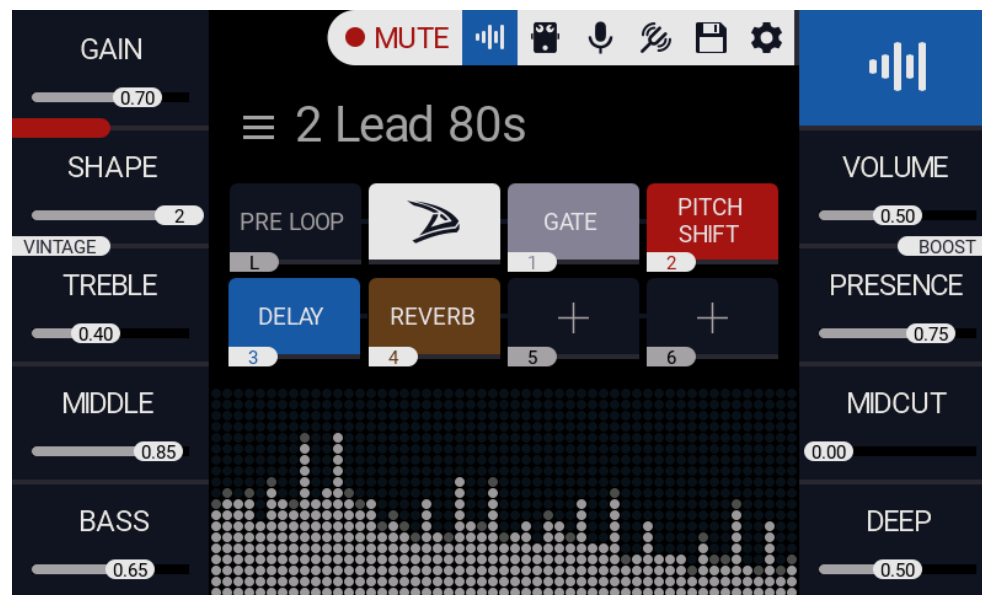
**TREBLE - MIDDLE - BASS** Rotate the relative encoder to adjust preamp EQ.

**VOLUME** Rotate the relative encoder to adjust preamp volume. This parameter could be remotely controlled with the MIDI control change message CC7.

**BOOST** Push the relative encoder to enable +3db volume boost. This parameter could be remotely controlled with the MIDI CC6.

**MIDCUT** Rotate the relative encoder to adjust the midcut intensity, centred at about 400hz.

**PRESENCE - DEEP** Rotate the relative encoder to adjust POWERAMP presence and DEEP. Please note that PRESENCE and DEEP parameters affect the **CABSIM** as well.





# FX

## FX SELECTION

One of the most interesting features of the VHX is the integrated DSP. It is placed between the PREAMP and POWERAMP, allowing for up to 7 simultaneous and completely programmable effects.

Each available SLOT is numbered from **1** to **6** except for the PRE LOOP, labelled **L** as the position is fixed before the PREAMP.

**TO ENABLE PRE LOOP** Push the relative labelled encoder.

**TO ASSIGN FX TO A SLOT** rotate the relative numbered encoder to scroll between all the available FXs.

**TO EDIT FX PARAMETER**, push the relative numbered encoder to enter **FX EDIT** screen.

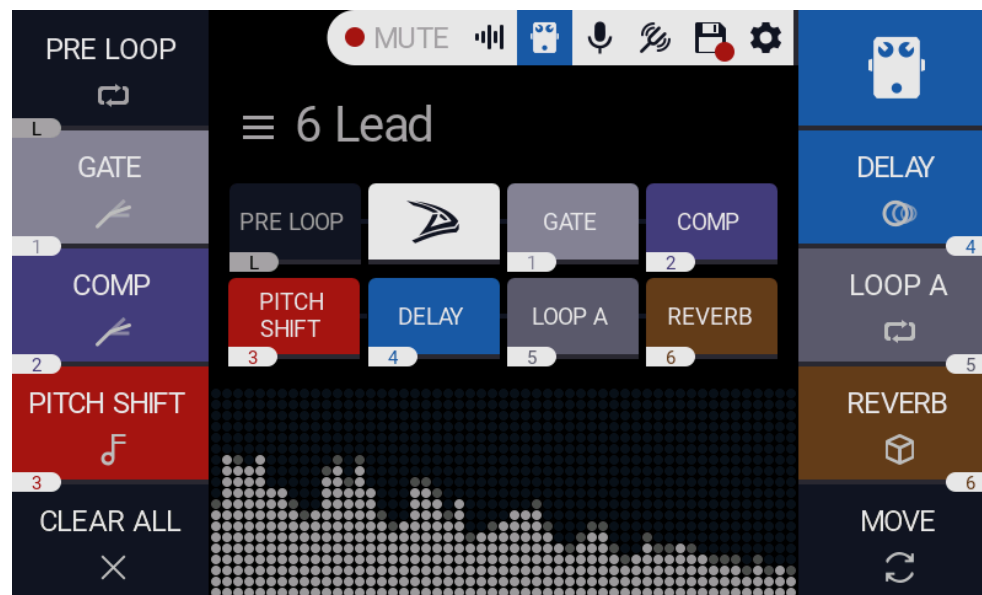
**TO BYPASS FX**, **hold** the relative numbered encoder.

**MOVE** Push the relative encoder to SWAP FX position between SLOTS: PUSH to enable the MOVE mode. ROTATE to move the blinking indicator to the effect you need to move. PUSH to confirm the selection. ROTATE to move the selected FX to the new SLOT. PUSH to confirm. LONG PUSH to **CLEAR** all effects.

**CLEAR ALL** Long Push to remove all the effects.

The signal path is SERIAL, and it is as follow:

**PRE LOOP** → **PREAMP** → **FX 1** → **FX 2** → **FX 3** → **FX 4** → **FX 5** → **FX 6** → **CABSIM** ⇔ **POWERAMP**



## FX EDIT

FX Edit screen let you edit selected effect parameters, by rotating the relative encoder. Push the **BACK** encoder to return to FX SELECTION Screen. PUSH the **EFFECT NAME** encoder to **TOGGLE BYPASS**. Some parameters (i.e. DELAY TIME, PITCH) do have a **FINE** and **COARSE** mode. Push the relative parameter encoder to toggle between the two modes.

## FX LIST

Below the effect list and the relative parameters.

**CHORUS** Speed, Depth, Feedback, Tone, Level.

**COMPRESSOR** Sustain, Attack, Release, Blend, Level.

**DELAY** Time (MIDI CC#2), Feedback, Speed, Depth, Damping, Tone, Level, TAP.

**EQUALIZER** 80 Hz, 240 Hz, 750 Hz, 2.2 KHz, 6.6 KHz, Bandwidth, Level.

**FLANGER** Speed, Depth, Feedback, Level.

**LOOP A / B** Mix, Send Level, Return Level.

**NOISE GATE** Threshold, Attack, Release, Decay.

**PHASER** Speed, Depth, Feedback, Level.

**PITCH SHIFT** Mode (QUAD, POLY), Pitch, Mix, Pitch A, Pitch B, Pitch C, Pitch D, Pitch Mix, Level.

**REVERB** Room, Decay, Damping, Tone, Level.

**TREMOLO** Speed (MIDI CC#2), Depth, Slope, TAP.



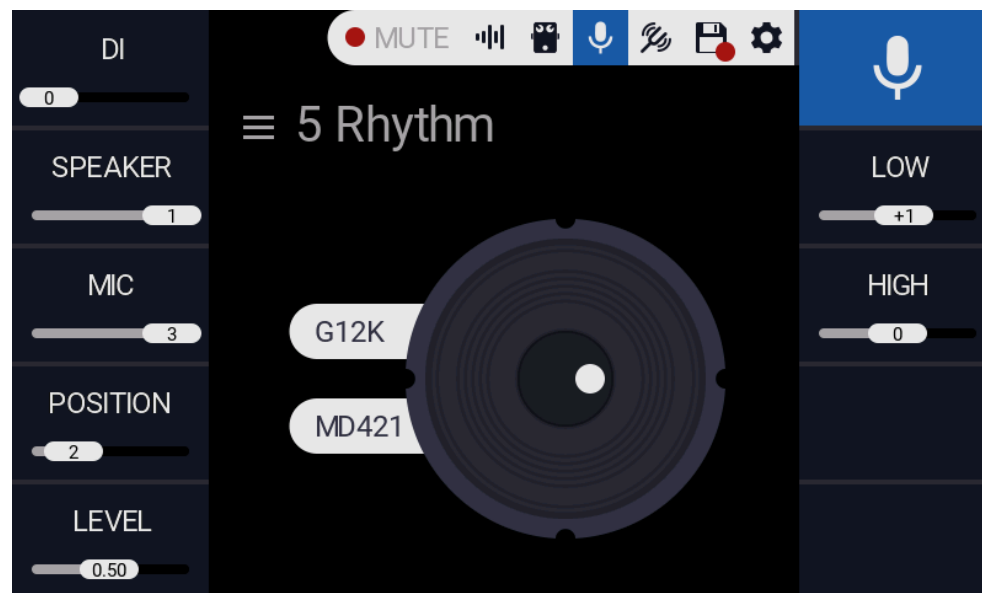
# CAB SIM

The integrated DSP does provide an IR based cabinet simulation as well. Specifically developed for the VHX, it allows you to quickly connect to FOH, without the hassle of configuring the microphones on stage.

CAB SIM could then be used in both **CABLESS** mode, without cabinet or load, or in parallel with the POWER AMP with a connected cabinet.

Both **HEADPHONES** and **XLR** are controlled from the CABSIM screen and could be used in parallel.

**HEADPHONES** and **XLR** supports **DI** mode, to be used with your preferred cabinet simulation hardware/software, or for reamping purpose.



**DI** Rotate the relative encoder to toggle DI MODE.

**SPEAKER** Rotate the relative encoder to scroll between the available SPEAKER: V30, G12K-100.

**MIC** Rotate the relative encoder to scroll between the available MIC: SM57, R121, C414, MD421.

**POSITION** Rotate the relative encoder to choose the MIC position relative to the speaker.

**LEVEL** Rotate the relative encoder to adjust output level. Please note that output level will affect both HEADPHONES and XLR.

**HIGH** Rotate the relative encoder to adjust the high frequency response.

**LOW** Rotate the relative encoder to adjust the low frequency response.



# TUNER

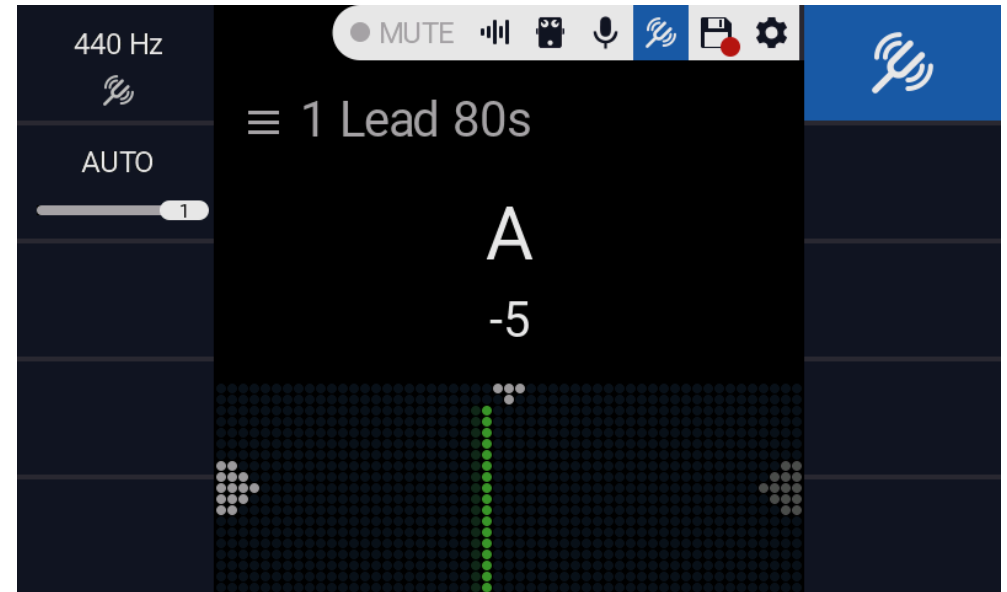
The VHX integrated tuner will let you check and setup your instrument quickly. It does feature an automatic mode to pop-up in the preamp screen, very handy for studio or recording session. To enable it, strum any string and leave it ringing for a couple of second.

Tuner screen could also be enabled with MIDI Control Change message CC 1.

Please note that tuner settings are **GLOBAL** and not per preset.

**440Hz** Rotate the relative encoder to adjust tuner reference.

**AUTO** Rotate the relative encoder to toggle automatic tuner.



# STORE

The STORE screen allows to store the current preset, preset name and display colour.

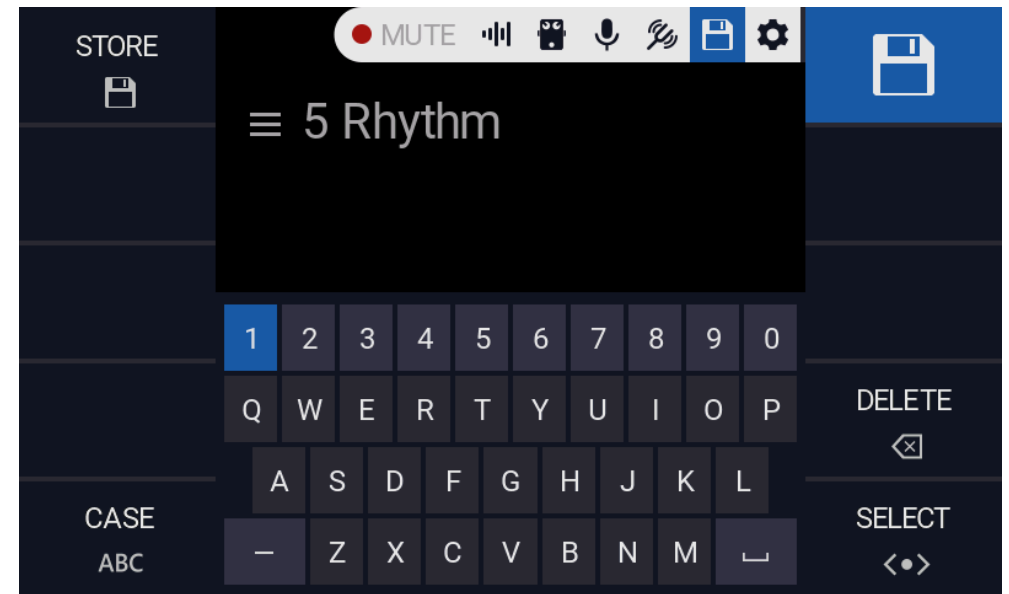
If the current preset has been **MODIFIED** from the previous state, the STORE icon on the navigation bar will show a **RED DOT**.

**STORE** Push the relative encoder to store the current preset, together with name and display colour.

**CASE** Push the relative encoder to toggle between LOWERCASE and UPPERCASE.

**DELETE** Push the relative encoder to delete the last character from the preset name.

**SELECT** Rotate the relative encoder to MOVE the selector over the displayed keyboard. Push the relative encoder to add the selected character.



# SETTINGS

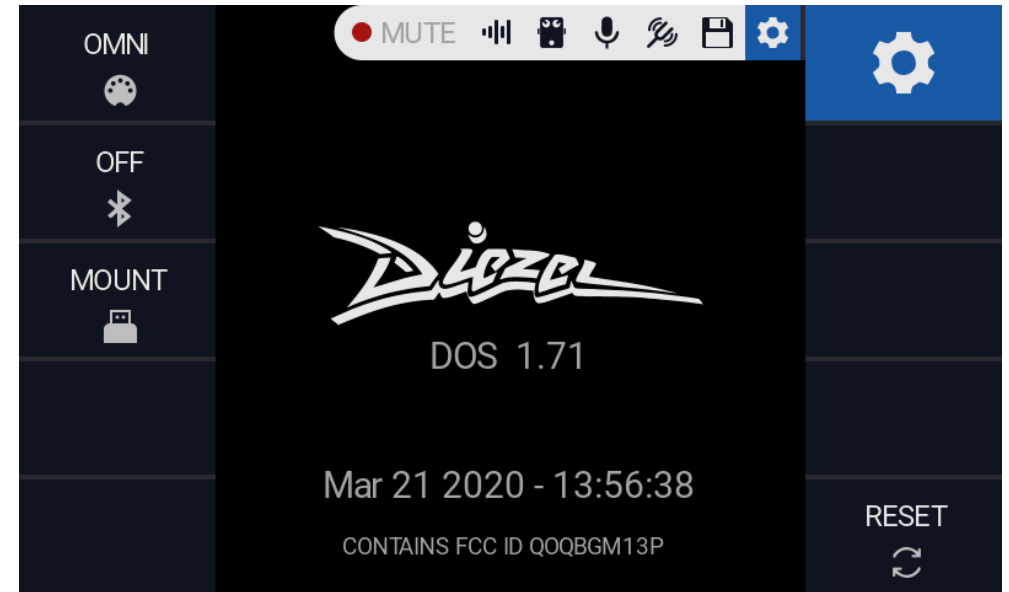
The settings screen allows you to edit VHX global settings and it gives information about the DOS (Diezel OS) version installed.

**MIDI** Rotate the relative encoder to select the MIDI channel. Please note the it does affect all the MIDI input channels, so Columbus, BLE-MIDI and USB MIDI.

**BLUETOOTH** Rotate the relative encoder to toggle the Bluetooth.

**USB** Push to MOUNT the VHX internal storage as USB MSC unit. Push again to UNMOUNT. Please note that while the USB is mounted the VHX UI is locked.

**RESET** Hold to RESET the VHX to default. **WARNING:** Doing so all your preset will be DELETED.



# MIDI

The VHX is fully MIDI capable. MIDI could be used via the MIDI IN, COLUMBUS, USB MIDI or via Bluetooth Low Energy MIDI-BLE.

**MIDI CHANNEL** is selected via the **SETTINGS** screen, as well as **OMNI** mode.

Supported **MIDI MESSAGES** are:

**PROGRAM CHANGE** messages will select the current preset, from 0 to 99.

**CONTROL CHANGE** messages could control various function of the VHX, as follow:

**CC 1** Toggle POWER AMP **MUTE** and enables **TUNER** screen.

**CC 2 TAP TEMPO** Global.

**CC 3 TAP TEMPO** for DELAY.

**CC 4 TAP TEMPO** for TREMOLO.

**CC 6 PREAMP VOLUME +3db BOOST**

**CC 7 PREAMP VOLUME** value.

**CC 16** Toggle ALL FX and PREAMP LOOP.

**CC 17** Toggle PREAMP LOOP.

**CC 18** Toggle FX 1.

**CC 19** Toggle FX 2.

**CC 20** Toggle FX 3.

**CC 21** Toggle FX 4.

**CC 22** Toggle FX 5.

**CC 23** Toggle FX 6.

**CC 64** Delay Level.



# UPDATE

The VHX could be updated using the USB connector located on the BACK PANEL together with a **PC, MAC** or **USB OTG** capable smartphone. Once connected, **MOUNT** the USB mass storage via the SETTINGS screen. It will appear to the OS as an **MSC DEVICE**, and the internal memory will be accessible just like a regular disk.

To **UPDATE** the VHX, please make sure that all the connection and power supply are stable and reliable, and follow the steps below:

**DOWNLOAD** the latest available software from [www.diezelamplification.com](http://www.diezelamplification.com) support page.

**POWER ON** the VHX.

**CONNECT** the VHX to a PC or USB OTG capable smartphone.

**MOUNT** the VHX USB via SETTINGS screen.

**COPY** the file named DOS.bin in the VHX disk root.

**POWER OFF** the VHX.

**POWER ON** the VHX and wait for the update to finish. **DO NOT** power off the VHX during this last steps.

In case of any **FAILURE**, the VHX will enter in **RECOVERY MODE**, please follow the above steps again to recover.





**DIEZEL**