

# VOCALIST® LIVE 4

## Vocal Harmony and Effects Processor



**DigiTech**

**Owner's  
Manual**



The symbols shown above are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash with arrowpoint in an equilateral triangle means that there are dangerous voltages present within the unit. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the owner's manual.

These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

### **ELECTROMAGNETIC COMPATIBILITY**

This unit conforms to the Product Specifications noted on the **Declaration of Conformity**. Operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

Operation of this unit within significant electromagnetic fields should be avoided.

- use only shielded interconnecting cables.

## **WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING:**

**KEEP THESE INSTRUCTIONS**

**HEED ALL WARNINGS**

**FOLLOW ALL INSTRUCTIONS**

**THE APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING LIQUID AND NO OBJECT FILLED WITH LIQUID, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS**

**CLEAN ONLY WITH A DRY CLOTH.**

**DO NOT BLOCK ANY OF THE VENTILATION OPENINGS. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.**

**DO NOT INSTALL NEAR ANY HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES, OR OTHER APPARATUS (INCLUDING AMPLIFIERS) THAT PRODUCE HEAT.**

**ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.**

**UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.**

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 prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

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.

**MAINS DISCONNECT:** The plug shall remain readily operable. For rack-mount or installation where plug is not accessible, an all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated into the electrical installation of the rack or building.

Manufacturer's Name:  
Manufacturer's Address:

DigiTech  
8760 S. Sandy Parkway  
Sandy, Utah 84070, USA

declares that the product:  
Product name:

Vocalist Live 4

Product option:  
EN60065,

all (requires Class II power adapter that conforms to the requirements of EN60065, EN60742, or equivalent.)

conforms to the following Product Specifications:

Safety: EN 60065

EMC: EN 55103-1  
EN 55103-2

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC as amended by Directive 93/68/EEC.

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## Warranty

We at **DigiTech®** are very proud of our products and back up each one we sell with the following warranty:

1. The warranty registration card must be mailed within ten days after purchase date to validate this warranty.
2. DigiTech warrants this product, when used solely within the U.S., to be free from defects in materials and workmanship under normal use and service.
3. DigiTech liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, provided the product is returned to DigiTech WITH RETURN AUTHORIZATION, where all parts and labor will be covered up to a period of one year. A Return Authorization number may be obtained from DigiTech by telephone. The company shall not be liable for any consequential damage as a result of the product's use in any circuit or assembly.
4. Proof-of-purchase is considered to be the burden of the consumer.
5. DigiTech 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.
6. The consumer forfeits the benefits of this warranty if the product's main assembly is opened and tampered with by anyone other than a certified DigiTech technician or, if the product is used with AC voltages outside of the range suggested by the manufacturer.
7. The foregoing is in lieu of all other warranties, expressed or implied, and DigiTech neither assumes nor authorizes any person to assume any obligation or liability in connection with the sale of this product. In no event shall DigiTech or its dealers be liable for special or consequential damages or from any delay in the performance of this warranty due to causes beyond their control.

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

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# Introduction

Congratulations on your purchase of the Vocalist<sup>®</sup> Live 4. The Vocalist Live 4 is a breakthrough processor that automatically generates live multi-part vocal harmony by analyzing guitar chord progressions. Armed with patent pending musIQ<sup>™</sup> Harmony Technology (which includes both musIQ note detection and musIQ harmony generation), the Vocalist Live 4 gives you accurate vocal harmonies even with complicated songs because only Vocalist Live tracks guitar chords, along with your voice.

## **The Vocalist<sup>®</sup> Live 4 Features**

- musIQ harmony technology
- One, two, three, or four voices of automatic harmony with selectable voicings (Unison, a 3rd up or down, a 5th up or down, and an octave up or down), generated based on incoming music from your guitar, or a manually selected key and scale/mode
- Selection of lead voice effects (Preamp, Reverb, Echo/Delay, Compressor, EQ, modulation and pitch effects)
- Next-generation vocal pitch detection, pitch shifting, and humanization processing.
- Built-in guitar tuner
- Built-in microphone preamp
- Stereo XLR balanced and 1/4" unbalanced line outputs
- 50 factory presets and 50 user (editable) presets
- Expression pedal input for real-time control of most performance parameters
- Guitar ground lift function
- External 1/8" audio input for MP3 and CD players
- Headphone output
- +48V phantom power
- 24-bit/44.1kHz audio quality

## **Included Items**

Before you get started, please make sure that the following items have been included:

- The Vocalist<sup>®</sup> Live 4
- PS0913B Power Supply
- This owner's manual
- Warranty Card

The utmost care was taken while your Vocalist Live 4 was being manufactured. Everything should be included and in perfect working order. If anything is missing, contact the factory at once. Please help us become acquainted with you and your needs by completing your warranty card or registering online at [www.digitech.com](http://www.digitech.com). It is your safeguard should a problem arise with your Vocalist Live 4.

**Important safety tip:** Always turn on amplifiers AFTER all other connections are made to the Vocalist Live 4 and AFTER the Vocalist Live 4 is powered up.

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# A Guided Tour of the Vocalist® Live 4

## **Overview**

The Vocalist® Live 4 is a revolutionary voice processor that creates musically correct harmonies for your singing voice that automatically change to fit with the current guitar chord and key of the music you have been playing.

## **About *musIQ™* Technology**

musIQ is a revolutionary technology that eliminates the need to enter key and scale information into the product as it listens to the notes/chords played on a guitar and makes sure that the harmony voices fit with the music. Real-time processing discerns the individual notes and key signatures that are played to automatically generate appropriate vocal harmonies that complement the lead vocal. With musIQ, you can focus on your live singing and playing performance, and discard song programming once and for all.

## **Quick Start**

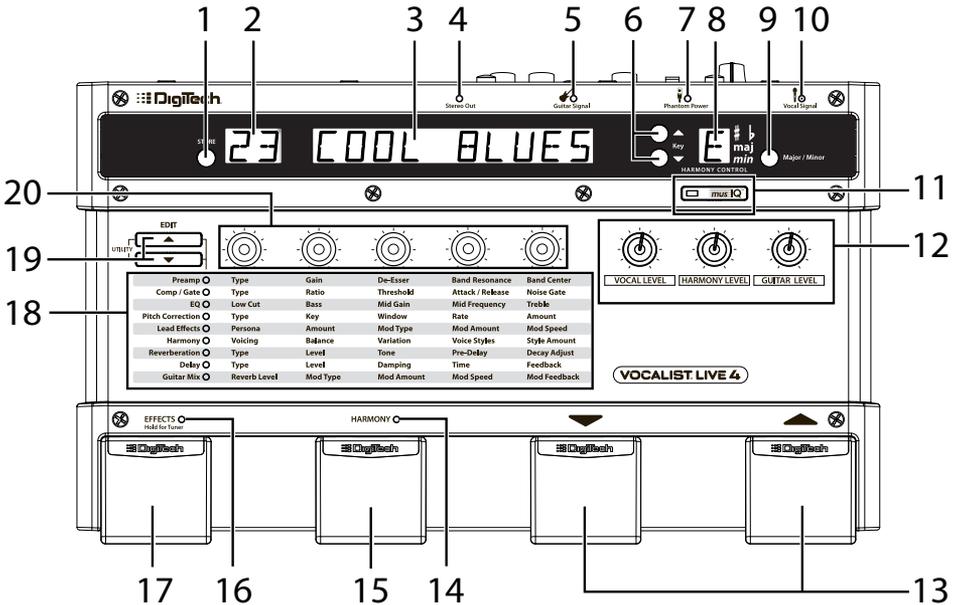
It's a good idea to read this brief manual completely, but if you want to start using the Vocalist Live 4 right away, go to the Getting Started section on page 7.

For more information on what the knobs and buttons do, refer to the Using the Vocalist Live 4 section on page 11.

To find out about using the tuner, see the Guitar Tuner section on page 12.

To locate and identify the various controls, inputs, and outputs, see the Front Panel and Rear Panel sections on pages 3 and 5.

## Front Panel



### 1. Store Button

Press to store changes you make to a preset. For more information on storing and editing presets, see page 11.

### 2. Numeric Display

Shows the number (location) of the selected preset. While editing, it also shows the value of the parameter being edited.

### 3. Alphanumeric Display

Shows the name of the selected preset or parameter names and values (when editing a preset).

### 4. Stereo Out LED

Indicates stereo output from the **Line Out** and **XLR** outputs is enabled (you can change this with the **Stereo/Mono** button on the rear panel).

### 5. Guitar Signal LED

Turns green when a guitar signal is detected in the **Guitar In** input, amber when the guitar signal is approaching levels that may clip, and red when the signal may be clipping and may degrade the ability of the Vocalist<sup>®</sup> Live 4 to detect the guitar notes.

### 6. Key Up/Down Buttons

Use these to select a key for the harmonies that will be generated (when the **musIQ™** button is not lit).

### 7. Phantom Power LED

Indicates the **Phantom Power** switch is engaged, and phantom power is being applied to the **Mic In** XLR input.

**Note:** Phantom power is normally only needed with condenser microphones and should never be used with ribbon microphones. To avoid damaging the microphone, please consult your microphone documentation to ensure phantom power is applied only when appropriate.

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## 8. **Key Display**

Shows the currently selected root key for generating harmonies (when the **musiQ™** button is not lit). The Key display includes accidental symbols (sharp and flat) as well as the scale modes major or minor.

## 9. **Major/Minor Button**

Toggles between major and minor when the **musiQ** button is not lit.

## 10. **Vocal Signal LED**

Turns green when a vocal signal is detected at the **Mic In** input, amber when the vocal signal is approaching its limit, and red when the built-in limiter is active. The limiter generally prevents clipping unless a very large input is applied.

## 11. **musiQ Button**

Turns automatic harmony generation on or off. When turned off, you can select the root key and modes for harmonies using the **Key Up/Down** buttons and the **Major/Minor** button. This can be used, for example, to manually set a key and scale when no guitar is available to trigger the musiQ-based harmony generation.

## 12. **Level Knobs**

### **Vocal Level**

Controls the lead vocal level in the mix being sent from the Vocalist® Live 4.

### **Harmony Level**

Controls the harmony vocal level in the mix being sent from the Vocalist Live 4.

### **Guitar Level**

Controls the guitar level in the mix being sent from the Vocalist Live 4.

## 13. **Up/Down Footswitches**

Use these to step through the presets. Hold either footswitch down to quickly scroll through the presets.

## 14. **Harmony LED**

Indicates harmonies are turned on.

## 15. **Harmony Footswitch**

Enables or disables the vocal harmonies. You can configure the **Harmony Footswitch** to be a toggle (press and release to turn harmonies on or off) or momentary (harmonies are active when you hold it down). See the Utility Parameters menu on page 23 for more information.

## 16. **Effects LED**

Indicates the vocal and guitar effects are turned on. Some effects may still be enabled when the LED is off; see the Utility Parameters menu on page 23 for more information.

## 17. **Effects/Tuner Footswitch**

Press to enable or disable any selected effects (reverb, compressor, etc.). See page 23 for more information about what effects can be enabled or disabled. Press and hold this footswitch for at least one second to enable the guitar tuner. Press the **Effects/Tuner** footswitch again to disable the guitar tuner. See page 12 for more information about the guitar tuner.

## 18. **Effects Matrix**

The Effects matrix is used to customize the sound and parameters of the Vocalist Live 4. Use the **Edit Up/Down** buttons to navigate the matrix rows. As the **Edit Up/Down** buttons are pressed, an LED illuminates indicating the currently selected effects row, and the VL4's main display shows the row name. Use the five **Parameter** knobs above the display matrix columns to edit the parameters for the selected effect row. For more information about the Effects matrix, see page 12.

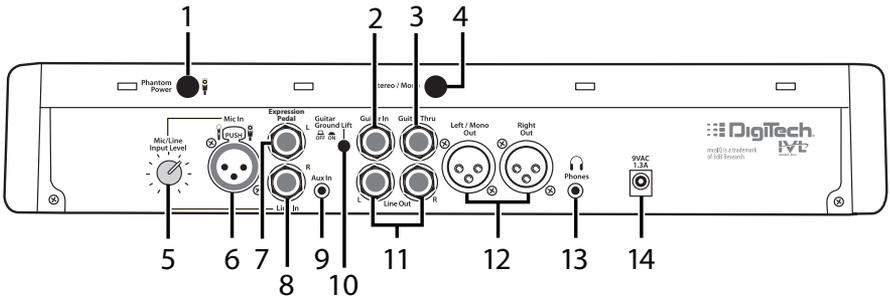
## 19. **Edit Up/Down Buttons**

Use these buttons to navigate through the Effects matrix rows. Press and hold both buttons simultaneously to access the Utility Parameters menu (see page 23).

## 20. **Parameter Knobs**

Use these to adjust parameters for the selected row in the Effects matrix.

## Rear Panel



### 1. Phantom Power

Enables 48 volt phantom power on the XLR mic input.

**Note:** Phantom power is normally only needed with condenser microphones and should never be used with ribbon microphones. To avoid damaging the microphone, please consult your microphone documentation to ensure phantom power is applied only when appropriate.

### 2. Guitar In

Connect a guitar directly to this high-impedance input. Note that there is no loss of quality between the Guitar In and Guitar Thru jacks.

### 3. Guitar Thru

Connect this output to the input of a guitar amplifier or powered speaker.

### 4. Stereo/Mono

When Stereo is selected (**Stereo Out LED** is lit), the harmony voices are panned slightly left and right, and certain effects (chorus, flanger, and reverb, for example) operate in stereo. When Mono is selected (**Stereo Out LED** is not lit), the output mix is mono and the outputs carry the same signal.

### 5. Mic/Line Input Level

This knob adjusts the gain of the Mic and Line inputs. Turn clockwise to increase gain, or counter-clockwise to decrease gain. If the **Vocal Signal LED** is turning red while you sing, you need to decrease the Mic gain.

### 6. Mic In

Connect a dynamic or condenser microphone to this XLR input. This input is the lead voice for the Vocalist<sup>®</sup> Live 4.

### 7. Expression Pedal

Connect an expression pedal here to control any parameter in the Effects matrix with your foot. See the Utility Parameters menu on page 23 for more information.

### 8. Line In

Connect a line input source (mixer, mic preamp, etc.) to this input. When connected to a source, this input is the lead voice for the Vocalist Live 4, and disables the **Mic In** XLR input.

### 9. Aux In

Plug in a CD or MP3 player to this 1/8" jack to add recorded music to the Vocalist Live 4 mix. Control the level with the CD or MP3 player's volume control.

### 10. Guitar Ground Lift

Eliminates most "hum" problems. If you hear a humming sound or buzz coming from your amp or P.A., try pressing this button.

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### **11. Line Out L/R**

Connect both these balanced/unbalanced outputs to a mixer, powered speakers or P.A. system. If only a single output is to be used, be sure the **Stereo Out LED** is not lit (use the **Stereo/Mono Out** button to change this, if necessary).

### **12. Left/Mono Out and Right Out (XLR Outputs)**

Connect these XLR balanced outputs to a powered speaker or mixer. If a mono mix is desired, use only the **Left/Mono** XLR jack and be sure the **Stereo Out LED** is not lit (use the **Stereo/Mono Out** button to change this, if necessary).

### **13. Phones**

Use this jack to hear the **Line Out L/R** mix through headphones.

### **14. Power**

Connect only the DigiTech® PS0913B power supply to this jack.

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# Getting Started

Before connecting the Vocalist® Live 4 to your amplifier, make sure that the power to your amplifier is off and that the Vocalist Live 4 is plugged into the wall and powered on. There is no power switch on the Vocalist Live 4. To turn the Vocalist Live 4 on or off, connect or disconnect the included PS0913B power supply from the Power Input jack.

## Connect the Microphone, Guitar, and P.A. or Mixer

1. Make sure the **Mic/Line Input Level** knob (located on the back panel) is turned all the way down (counter-clockwise).
2. Plug a microphone into the Vocalist Live 4 **Mic In** jack.
3. If you need phantom power, press the **Phantom Power** switch on the Vocalist Live 4 back panel. The **Phantom Power LED** will illuminate.

**Note:** Phantom power is normally only needed with condenser microphones, and should never be used with ribbon microphones. To avoid damaging the microphone, please consult your microphone documentation to ensure phantom power is applied only when appropriate.

4. Plug your guitar into the Vocalist Live 4 **Guitar In** jack.
5. Make sure your guitar amplifier is turned off and the volume level is turned all the way down.
6. Make sure your P.A. or mixer is turned off and the volume levels are turned all the way down.
7. Connect the Vocalist Live 4 **Guitar Thru** to your amplifier's input or the P.A. system.
8. Plug the Vocalist Live 4 **Left** and **Right Line Outputs** into your P.A. system or mixer. Or, if you are only using a single channel or mono amplification system, connect the Vocalist Live 4 **Left/Mono Out** to the P.A. system or mixer, and press the **Stereo/Mono** button so the **Stereo Out LED** is not lit.

## Set the Vocalist® Live 4 Controls

1. Select preset 1 (**3RD ABOVE**) with the **Up/Down** footswitches.
2. Turn the **VOCAL LEVEL**, **HARMONY LEVEL**, and **GUITAR LEVEL** knobs to their 12 o'clock positions.
3. Press the **musIQ™** button so that it is lit.
4. Press the **HARMONY FOOTSWITCH** so that the **HARMONY LED** just above it is lit.

## Adjust Levels and Tune Your Guitar

1. Observe the **Guitar Signal LED** while playing your guitar. Adjust the output level of your guitar until the **Guitar Signal LED** lights green or amber most of the time. (For more information about setting levels, see page 13.)
2. Sing into the mic while gradually turning up the Vocalist Live 4 **Mic/Line Input Level** knob until the **Vocal Signal LED** lights amber most of the time. (For more information about setting levels, see page 13.)
3. Press and hold the **EFFECTS/TUNER FOOTSWITCH** until the display reads **TUNER**. Tune each string until a star (\*) without arrows (↔) or (←) appears in the center of the display for each string, indicating it's in tune. The note being played appears in the **Key**

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display. The built-in guitar tuner works optimally with a strong guitar signal, so don't turn down your guitar to tune. The guitar output will automatically be muted when you're in tuner mode.

**NOTE: It is important that your guitar is properly tuned in order for the musIQ™ technology to generate the best sounding harmonies. Alternate tunings (for example, DADGAD, or tuning down a half step) are fine, as long as the built-in tuner shows each string as “in tune”. If you are using an external tuner, just make sure the reference is set to 440 Hz.**

4. Turn on your amplifier and gradually turn it up until you reach a comfortable listening level.
5. Turn on your P.A. system and gradually turn it up until you reach a comfortable listening level.
6. While playing a chord on your guitar, sing a note. You should hear your guitar and your voice, plus a harmony voice. If not, repeat the steps above or consult the Troubleshooting section on page 25.

### ***Set up the Mixer for Stereo Operation (If Using Two Channels of a Mixer)***

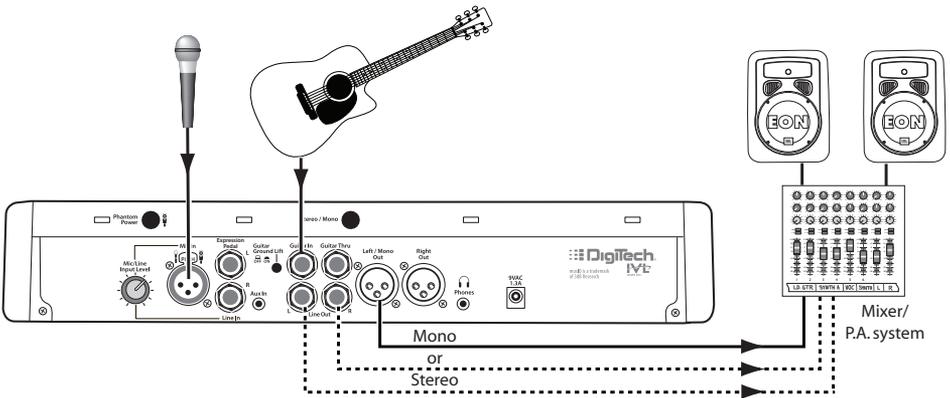
1. Turn the Vocalist® Live 4 **Mic/Line Input Level** knob completely counter-clockwise.
2. Set the mixer channels' faders to 0dB.
3. Set the mixer's master fader to its minimum position (no output signal).
4. Set the pan controls on the selected mixer channels hard left and hard right.
5. While singing, gradually turn up the Vocalist Live 4's **Mic/Line Input Level** knob until the **Vocal Signal LED** lights amber most of the time, and red during the loudest parts only. (For more information about setting levels, see page 13.)
6. Gradually bring the mixer's master fader up until you reach your desired level.

# Common Setups

There are many ways to set up the Vocalist® Live 4. Some useful setups are shown here.

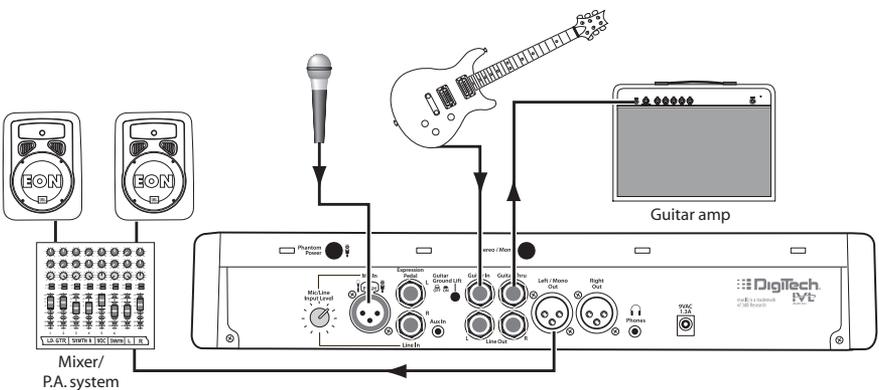
## Guitar and Microphone In/P.A. Out (Mono or Stereo)

This is a basic setup for stereo or mono output. For stereo output, press the **Stereo/Mono** button so the **Stereo Out LED** is lit. For mono output, press the **Stereo/Mono** button so the **Stereo Out LED** is not lit. Note that the XLR outputs could also be used for stereo output.



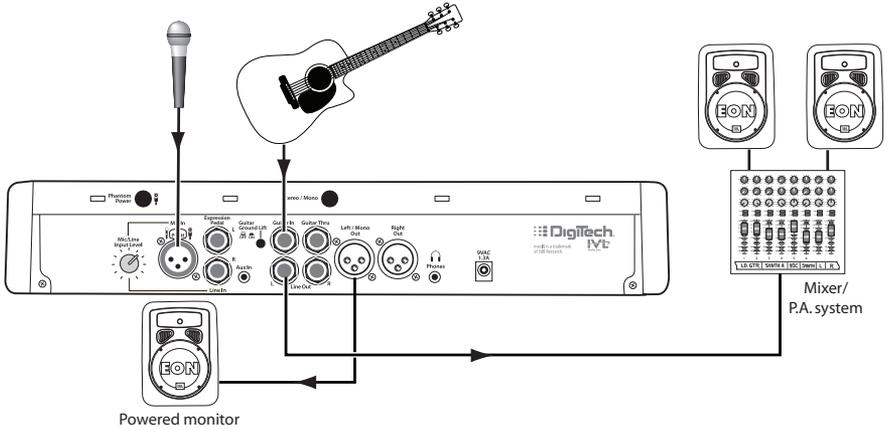
## Guitar and Microphone In/Guitar Amp and P.A. Out (Mono)

This setup bypasses the Vocalist Live 4 guitar effects via the Guitar Thru output. A mono vocal and guitar signal is sent to the mixer. Press the **Stereo/Mono** button so the **Stereo Out LED** is not lit.



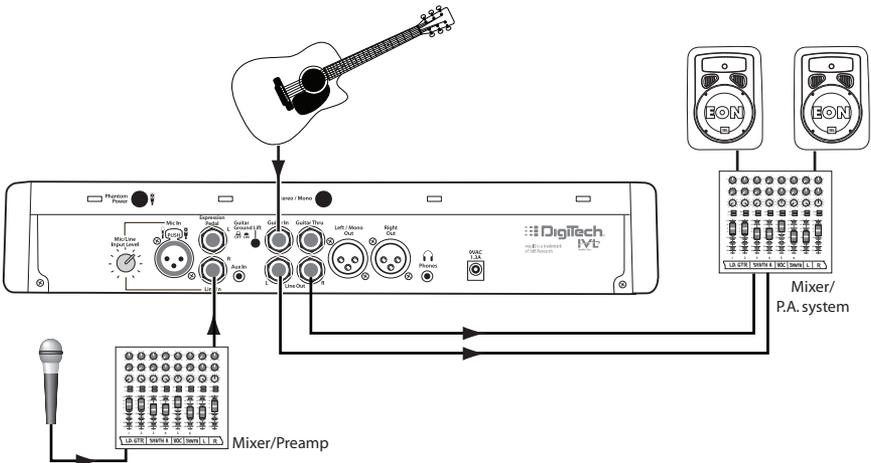
## Guitar and Microphone In/P.A. and Powered Monitor Out (Mono)

This setup sends guitar and vocals to the mixer as well as an onstage monitor. Press the **Stereo/Mono** button so the **Stereo Out LED** is not lit.



## Guitar and Mixer or Preamp In/P.A. Out (Stereo)

This setup includes a preamp or mixer between the microphone and the Vocalist® Live 4. Press the **Stereo/Mono** button so the **Stereo Out LED** is lit.



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# Using the Vocalist® Live 4

In addition to creating vocal harmonies, the Vocalist Live 4 also offers a wide variety of effects you can apply to your voice. You can quickly change the harmonies and effects by changing **presets**. Each preset has a name and a number, as well as a set of harmonies and/or other effects assigned to it.

- You can cycle through all the different presets by pressing the **Up/Down Footswitches**, located on the lower right side of the Vocalist Live 4.
- You can turn a preset's harmonies on or off with the **Harmony Footswitch**.
- You can turn a preset's effects on or off with the **Effects Footswitch**.

There are two kinds of presets: **User** and **Factory**. You can change User presets (numbers 1-50), but you can't change Factory presets (numbers 51-100). When the Vocalist Live 4 ships from the factory, the User and Factory presets are identical

Use the Effects Matrix, Edit Up/Down buttons, and Parameter knobs to edit User presets.

## Editing, Storing and Copying User Presets

### To edit a User preset

1. Select a User preset with the **Up/Down** footswitches. User presets are numbered 1-50.
2. Press one of the **Edit Up/Down** buttons to select a row in the Effects Matrix. Each row controls one effect, named in the leftmost column. When a row is selected, the display briefly shows each of its five parameters.
3. Turn a Parameter knob to change the parameter listed below it in the selected Effects Matrix row. The parameter's name and value appear in the Alphanumeric display when you turn its Parameter knob. Repeat this step for each parameter you want to change.
4. Repeat steps 2 and 3 for each effect you want to edit.

### To store your changes to a User preset

**Warning:** Do not disconnect the power from the Vocalist Live 4 when storing a preset (when the Alphanumeric display reads *STORING . . .*) Doing so may erase your user presets. In the event that this happens, perform a Factory Reset, described on page 24.

1. Press the **Store** button. The Alphanumeric display briefly reads *STORE TO*, then the currently selected preset name and number appear. The first letter in the preset's name flashes.
2. Press the **Store** button again to store the preset to the current preset number (or press any button other than **Store** or **Key Up/Down** to cancel).

### To copy a User preset to a different preset number

1. Select a User preset with the **Up/Down** Footswitches (presets 1-50).
2. Press the **Store** button. The Alphanumeric display reads *STORE TO*.
3. Turn the leftmost Parameter knob to select a User preset number (1-50).
4. Press the **Store** button again to complete the copy procedure (or press any button other than **Store** or **Key Up/Down** to cancel).

### To rename a User preset

1. Select a User preset with the **Up/Down** Footswitches (presets 1-50).
2. Press the **Store** button. The Alphanumeric display reads *STORE TO*.
3. Turn the second-from-left Parameter knob to select a letter in the Alphanumeric display (or use the **Key Up/Down** buttons). The selected letter flashes.
4. Turn the third-from-left Parameter knob to change the selected letter.
5. Press the **Store** button again (or press any button other than **Store** to cancel).

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## Level Knobs

These three knobs let you adjust the mix being sent from the Vocalist® Live 4 to the P.A. or mixer. The mix includes your lead vocal, the harmony vocals, and your guitar signal.

Turn a knob clockwise to increase its respective level, or counterclockwise to decrease its level.

## Effects Matrix

This table lists the effects you can add to a preset (listed in the left column), and the parameters you can adjust for each effect (listed in the columns below the **Parameter** knobs).

For descriptions of the effects and their parameters, see page 14.

## musIQ™ Button

Press this button to turn automatic key detection on or off. When this button is lit and harmonies are active, the Vocalist Live 4 determines the proper key based on the guitar chords being played. When this button is not lit, active harmonies are produced in the key shown in the **Key Display** (selected with the **Key Up/Down** and **Major/Minor** buttons).

## Key Display, Key Up/Down Buttons, and Major/Minor Button

When the **musIQ** button is not lit, you can select the key in which harmonies will be produced. Use the **Key Up/Down** buttons to select a key (C - B), and press the **Major/Minor** button to cycle through major and minor modes for the selected key.

## Effects Footswitch

This footswitch turns some or all effects in a preset on or off. It does not affect the harmonies. While effects can be turned on or off and adjusted individually within a preset, the **EFFECTS** footswitch activates or deactivates some or all of them simultaneously.

When the LED above the **EFFECTS** footswitch is illuminated, the effects are on. When the LED is turned off, the effects are turned off.

Note that when the Vocalist Live 4 ships from the factory, the **EFFECTS** footswitch is configured to turn ALL effects (Preamp, Comp/Gate, EQ, Pitch Correction, Lead Effects, Reverberation, Delay, Guitar Mix) on or off, but you can select which effects are turned on or off via the FX Footswitch Control setting in the Utility parameters. For example, you can configure the **EFFECTS** footswitch to turn all effects on or off, or all effects except distortion, or all effects except reverb. See the Utility Parameters menu on page 23 for more information.

## Harmony Footswitch

This footswitch turns the harmonies on or off. While multiple harmonies can be selected within a preset, the **HARMONY** footswitch activates or deactivates any selected harmonies simultaneously.

When the LED above the **HARMONY** footswitch is illuminated, the harmonies are on. When the LED is turned off, the harmonies are turned off.

## Guitar Tuner

Since the Vocalist Live 4 relies on accurate incoming notes to generate its harmony voicings, it is imperative that your guitar be in tune. The integrated digital tuner of the Vocalist Live 4 makes tuning your guitar fast and easy.

To activate the guitar tuner, simply press and hold the **EFFECTS** footswitch until the display reads **TUNER**. Tune each string until a star (\*) without arrows (↔) or (↔) appears in the center of the display for each string, indicating it's in tune. The note being played appears in the **Key** display. The built-in guitar tuner works optimally with a strong guitar signal, so don't turn down your guitar to tune. The guitar output will automatically be muted when you're in tuner mode.

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**Tip:** The Vocalist® Live 4 “remembers” about 30 seconds of music while you play to determine the proper harmonies. Entering and exiting the tuner clears this memory. This can be useful when you’re switching between songs with radically different chord progressions.

## **Mono and Stereo**

You can output the lead vocal and harmonies in either mono or stereo. To use a mono signal, press the **Stereo/Mono** button so the Stereo Out LED is not lit, and connect the **Line Out Left** or **Left/Mono Out XLR** output to your P.A.

To use a stereo signal, press the **Stereo/Mono** button so the **Stereo Out LED** is lit, and connect both XLR or Line outputs to your P.A.

## **Regarding External Effects Pedals**

Do not hook up any other effects pedals to your guitar prior to plugging it into the Vocalist Live 4, as this could affect vocal harmony generation. The only thing between your guitar and the Vocalist Live 4 should be the guitar cable. Use the **Guitar Thru** to connect your effects and stomp boxes.

## **Setting Levels on the Vocalist® Live 4**

### **Setting the Vocal Level**

It is recommended you set your vocal level by adjusting the **Mic/Line Input Level** knob on the rear panel so that the **Vocal Signal LED** is amber during loud vocal sections and only briefly turns red on the very loudest vocal sections. The Vocalist® Live 4 will normally prevent the vocal harmonies from clipping, even when the LED is red, but for optimum voice quality the LED should turn red only briefly or not at all.

Once the overall vocal level is set with the **Mic/Line Input Level** knob, you can increase or decrease the amount of lead vocals in the mix with the **Vocal Level** knob. You can increase or decrease the amount of harmonies in the mix with the **Harmony Level** knob.

### **Setting the Guitar Level**

Ideally the **Guitar Signal LED** should be green or amber while playing. Most electric and acoustic/electric guitars send their signal at a level appropriate for the Vocalist Live 4. If you have a volume control on your guitar (for example, an acoustic guitar with a pre-amp built in), you should adjust the volume so that the **Guitar Signal LED** is green or amber most of the time while playing.

Some older guitars send a very low signal. If your guitar doesn’t send a strong enough signal to turn the **Guitar Signal LED** green, try setting the Guitar Sensitivity (located in the Utility Parameters, see page 23) to **GTRSENS HI**.

Once the guitar level is set with your guitar’s volume control, you can adjust how much guitar is heard in the mix with the **Guitar Level** knob.

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## Effects and Parameter Descriptions

### Preamp

The Preamp row includes a model of a tube-based preamp, a de-esser and audio frequency band limiting. The preamp is controlled by the Type and Gain parameters. The de-esser is controlled by the De-Esser parameter, and band limiting is controlled by the Resonance and Band Center parameters. In order to turn the preamp row off, you need to set Type to *PRE BYPASS*, De-esser to 0, and Band Resonance to 0.

<b>Type</b>	1 <i>PRE BYPASS</i> 2 <i>PRE TUBE</i> 3 <i>PRE HARSH</i>	Bypasses the preamp model (turns it off).  Selects a tube preamp model, which provides mild distortion to give your vocals more warmth.  Selects a preamp with heavy distortion and low susceptibility to feedback.
<b>Gain</b>	<i>PRE GAIN</i>	Adjusts the preamp's gain. Range: 0-99
<b>De-esser</b>	<i>DE-ESSER</i>	Increasing this value applies more gain reduction to sibilant sounds. Range: 0-99
<b>Band Resonance</b>	<i>BAND RES</i>	Controls the narrowness of the selected audio frequency band (see Band Center, below). All frequencies outside the band are attenuated while all frequencies inside the band have no attenuation. There is no band limiting applied when this parameter is set to 0. As this parameter is turned up, the band becomes narrower, and the effect of the band limiting becomes more prominent. Range: 0-99.
<b>Band Center</b>	<i>BANDCENxxxx</i>	Controls the location of the audio frequency band center, where XXXX is the band center in Hz. Range: 80-7650 Hz

## Comp/Gate

The Comp/Gate affects the incoming vocal's dynamics. The Comp/Gate can be used to smooth out a vocal performance by adjusting the outgoing gain of the signal based on the incoming amplitude of the vocal. The Gate function is useful for removing background noise from the incoming signal, or for muting the signal when it falls below a certain threshold. In order to turn the Comp/Gate row off, you need to turn Type to *OFF* and Noise Gate to *GATE OFF*.

<b>Type</b>	1 <i>CMP OFF</i> 2 <i>CMP HARD</i> 3 <i>CMP SOFT</i> 4 <i>CMP SOFTER</i>	Turns the compressor off.  Abruptly reduces gain when the input level rises above the threshold. (Hard knee.)  Gently reduces gain when the input level rises above the threshold. (Soft knee.)  Very gently reduces gain when the input level rises above the threshold. (Softer knee.)
<b>Ratio</b>	<i>CRATIO x.x</i>	The ratio (x.x) of the change in input level to the change in output level, measured in decibels (dB). For example, a 2:1 ratio means that for every 2 dB the input level changes, the output level changes 1 dB. Range: 1.0 - 5.0 <b>Warning:</b> Using a high compression ratio increases susceptibility to feedback due to the higher gain used.
<b>Threshold</b>	<i>CMP THRESH</i>	This parameter determines the input level of the "knee." A value of 0 corresponds to 0 dB and a value of 99 corresponds to -40 dB. Range: 0-99
<b>Attack/Release</b>	<i>CMP RATE</i>	Controls how quickly the compressor begins and ends its effect on the signal. Range: 1-9
<b>Noise Gate</b>	<i>GATE OFF</i> <i>GATE -xxdB</i>	Turns the Gate function off.  The Gate function triggers at -xx decibels. Range: -80dB to -20dB

## EQ

The EQ parameters allow the tone of the incoming vocal to be adjusted as indicated by the table below. This function cannot be entirely bypassed via a single parameter; instead the Low Cut must be turned *OFF* and the remaining gains (*dB BASS*, *dB MID GAIN*, *dB TREBLE*) must be set to "0 dB" to bypass this feature.

<b>Low Cut</b>	<i>LOCUT OFF</i> <i>LOCUT xxxHZ</i>	Low cut feature is turned off.  All frequencies below xxx Hertz are attenuated. Range: 60Hz - 120Hz
<b>Bass</b>	<i>dB BASS</i>	Reduces or increases the volume of bass frequencies. Range: -12 to 12dB
<b>Mid Gain</b>	<i>dB MID</i>	Reduces or increases the volume of midrange frequencies. Select this frequency with Mid Frequency. Range: -12 to 12
<b>Mid Frequency</b>	<i>MIDF xxxxHZ</i>	Selects the frequency (xxxx) that is reduced or increased with Mid Gain. Range: 80Hz - 7650Hz
<b>Treble</b>	<i>dB TREBLE</i>	Reduces or increases the volume of treble frequencies. Range: -12 to 12dB

## Pitch Correction

Pitch correction detects the note you're singing and processes it to make it more precise. For example, if you're singing a C, and it's a little flat (but not quite B), pitch correction alters the note so that a more precise C is heard through the mixer or P.A. Pitch correction requires you to choose a scale (or mode) and a key (or root note) so the Vocalist® Live 4 knows what notes to correct to. The parameters below control how pitch correction is applied to the lead vocal.

Typically, most singers use the *PC CHROM* scale for pitch correction. In this case, the Key parameter is not used, and there is no need to change the pitch correction scale between songs.

Scales and modes are described below using degrees, where the number 1 represents the root of the scale or mode, and is determined by the Key parameter. A lowercase "b" indicates the note is flat.

Type					
1	<i>PC OFF</i>	Pitch correction is turned off.	15	<i>PC PHRYG</i>	Phrygian Mode [1 b2 b3 4 5 b6 b7]
2	<i>PC CHROM</i>	12 Note Chromatic Scale [1 b2 2 b3 3 4 b5 5 b6 6 b7 7]	16	<i>PC LYDIAN</i>	Lydian Mode [1 2 3 b5 5 6 7]
3	<i>PC MAJOR</i>	Major Scale [1 2 3 4 5 6 7]	17	<i>PC MIXOLYD</i>	Mixolodian Mode [1 2 3 4 5 6 b7]
4	<i>PC MIN NAT</i>	Natural Minor Scale [1 2 b3 4 5 b6 b7]	18	<i>PC AEOLIAN</i>	Aeolian Mode [1 2 b3 4 5 b6 b7]
5	<i>PC MIN HRM</i>	Harmonic Minor Scale [1 2 b3 4 5 b6 7]	19	<i>PC LOCRIAN</i>	Locrian Mode [1 b2 b3 4 b5 b6 b7]
6	<i>PC MIN MEL</i>	Ascending Melodic Minor Scale [1 2 b3 4 5 6 7]	20	<i>PC IN-SEN</i>	Japanese In Sen Scale [1 b2 4 5 b7]
7	<i>PC BLUES</i>	Blues Scale [1 b3 4 b5 5 b7]	21	<i>PC ARABIC</i>	Arabic Scale [1 b2 3 4 5 b6 7]
8	<i>PC PENTMAJ</i>	Major Penatonic Scale [1 2 3 5 6]	22	<i>PC NEAPOL</i>	Neapolitan Scale [1 b2 b3 4 5 6 7]
9	<i>PC PENTMIN</i>	Minor Penatonic Scale [1 b3 4 5 b7]	23	<i>PC NEAPMIN</i>	Neapolitan Minor Scale [1 b2 b3 4 5 b6 7]
10	<i>PC DIMIN</i>	Diminished Scale [1 2 b3 4 b5 b6 6 7]	24	<i>PC HUNGMIN</i>	Hungarian Minor Scale [1 2 b3 b5 5 b6 7]
11	<i>PC BEBMAJ</i>	Major Bebop Scale [1 2 3 4 5 b6 6 7]	25	<i>PC ENIGMA</i>	Enigmatic Scale [1 b2 3 b5 b6 b7 7]
12	<i>PC BEBPDOM</i>	Dominant Bebop Scale [1 2 3 4 5 b6 b7 7]	26	<i>PC MAJ TRI</i>	Major Triad Scale [1 3 5]
13	<i>PC WHLTONE</i>	Whole Tone Scale [1 2 3 b5 b6 b7]	27	<i>PC MIN TRI</i>	Minor Triad Scale [1 b3 5]
14	<i>PC DORIAN</i>	Dorian Mode [1 2 b3 4 5 6 b7]	28	<i>PC NOTE</i>	Single Note [1]

<b>Key</b>	<i>PC x</i>	<p>Selects the key or root of the scale. For example, if the Type is set to MAJOR, and Key is set to PC C, the notes that will be corrected to are C, D, E, F, G, A, and B.</p> <p><b>Note:</b> This parameter is ignored when the scale type is set to <i>PC CHROM</i>.</p>
<b>Window</b>	<i>PC WINDOW</i>	<p>The window parameter controls the window or extent around each note that pitch correction will be applied. If the window is small, then your pitch will only be altered if your input pitch is close to the note already. If the window is large, then pitch correction will be applied even if your input pitch is far from the note. Range: 1-99</p>
<b>Rate</b>	<i>PC RATE</i>	<p>The pitch correction rate controls how aggressively your pitch is corrected. If the rate is low, then all of your rapid pitch variations (e.g. vibrato, scoops etc) will be left untouched, and only long sustained notes will be corrected. If the rate is high, then all of your pitch variations will be removed resulting in a very flat robotic sounding voice.</p> <p>Range: 1-99</p>
<b>Amount</b>	<i>PC AMOUNT</i>	<p>The amount parameter scales the amount of pitch correction applied to the input voice. The range is 0 to 99. When set to 99, the full pitch correction amount is applied, but as the amount control is turned down, the amount of pitch correction is reduced in proportion to how close you are to the target note. So, larger deviations are corrected more than smaller deviations, and small intentional pitch deviations are preserved. This is probably best understood through the following examples:</p> <p>With the amount set to 99, a 10 cent flat input will be corrected by 10 cents and a 50 cent flat input will be corrected by 50 cents.</p> <p>With the amount set to 80, a 10 cent flat input will be corrected by approximately 5 cents and a 50 cent flat input will be corrected by approximately 40 cents.</p> <p>With the amount set to 0, a 10 cent flat input will not be corrected and a 50 cent flat input will be corrected by approximately 10 cents.</p>

## Lead Effects

The Lead Effects modify the incoming vocal by changing its pitch or timbre in real time. There are Persona effects, which change the character of the voice, and Mod effects which add modulation changes such as tremolo or chorus to the incoming vocal signal. The effects in the Lead Effects row can be turned off by setting the Persona to `OFF`, and the Mod Type to `OFF`. Note that Lead Effects apply to the lead vocal (your voice) only. To modify the harmony voices, use the Voice Styles parameter in the Harmony effect (described on page 19).

<b>Persona</b>	1 PER OFF 2 PER BORG 3 PER PIXEL 4 PER ROBO 5 PER BIG 6 PER SMALL 7 PER GIANT 8 PER ELF 9 PER CHIP 10 PER VIBR1 11 PER VIBR2 12 PER VIBR3 13 PER OPERA 14 PER ROCK 15 PER ELVIS 16 PER BOB 17 PER SHEEP 18 PER GRANNY	Effect is off. Metallic ringing. Stepped pitch. Fixed pitch. Bigger person. Smaller person. Very large person (with octave down shift). Very small person (with octave up shift). Instrumental shift sound. Light, natural sounding vibrato. Slower vibrato. Ballad-type vibrato. Tenor opera vibrato. Vibrato and some gender. Big vibrato, scoop, and some gender. Scoops into notes. "Baaa" sound. Wavery voice.
<b>Amount</b>	PER AMT	Determines the amount of persona effect heard in the output. Range: 0-99
<b>Mod Type</b>	1 VMOD OFF 2 VMOD THICK 3 VMOD CHOR 4 VMOD FLANG 5 VMOD TREM 6 VMOD STUTR	No mod effect. Thicken. Chorus. Flanger. Tremolo. Stutter.
<b>Mod Amount</b>	VMOD AMT	Determines the amount of mod effect heard in the output. Range: 0-99
<b>Mod Speed</b>	VMOD SPEED	Determines the speed of the mod effect's modulation. Range: 1-99

## Harmony

These settings let you select the number and type of background voices that are generated by the Vocalist® Live 4. You can add 1-4 voices of harmony or duplicates (unison) to your lead vocal. The different harmony combinations appear as abbreviations in the Alphanumeric display. Each abbreviation represents one voice. The combinations are numbered; each combination's number appears in the Numeric display.

The abbreviations stand for:

U	Unison. Creates a copy of the lead vocal.
UC	Unison corrected. Creates a copy of the lead vocal with pitch correction.
3U	Harmony is one third up from the lead vocal.
3D	Harmony is one third down from the lead vocal.
5U	Harmony is one fifth up from the lead vocal.
5D	Harmony is one fifth down from the lead vocal.
8U	Harmony is one octave up from the lead vocal.
8D	Harmony is one octave down from the lead vocal.

**Note:** The 3U and 5U (third up and fifth up) settings produce harmonies that are only nominally third up and fifth up. They vary depending on the guitar chord and input vocal pitch.

**Note:** Turning on either a Lead Effect persona or pitch correction requires the use of a harmony voice. If all harmony voices are being used in the current preset, the least important harmony voice is automatically selected for this purpose.

Voicing				
1	OFF	No harmonies.	17 U U	Two voices of unison.
2	8D	Octave down.	18 3U 3U	Third up, third up.
3	5D	Fifth down.	19 3U 5U	Third up, fifth up
4	3D	Third down.	20 8D 5D 3D	Octave down, fifth down, third down.
5	U	Unison.	21 8D U 8U	Octave down, unison, octave up.
6	UC	Unison w/ pitch correction.	22 5D 3D U	Fifth down, third down, unison.
7	3U	Third up.	23 5D 3D 3U	Fifth down, third down, third up.
8	5U	Fifth up.	24 5D U 5U	Fifth down, unison, fifth up.
9	8U	Octave up.	25 3D U 3U	Third down, unison, third up.
10	8D 8U	Octave down, octave up.	26 3D 3U 5U	Third down, third up, fifth up.
11	5D 3D	Fifth down, third down.	27 U 3U 5U	Unison, third up, fifth up.
12	5D 3U	Fifth down, third up.	28 3U 5U 8U	Third up, fifth up, octave up.
13	5D 5U	Fifth down, fifth up.	29 5D 5D 5U5U	Fifth down, fifth down, fifth up, fifth up.
14	3D 3D	Third down, third down.	30 5D 3D 3U5U	Fifth down, third down, third up, fifth up.
15	3D 3U	Third down, third up.	31 3D 3D 3U3U	Third down, third down, third up, third up.
16	3D 5U	Third down, fifth up.	32 U U U U	Four voices of unison.

<b>Balance</b>	HARM BAL	Controls the balance between the generated harmony voices. If there is only one voicing, then this control has no effect. But if there is more than one voicing on, then this parameter controls the balance between these voices. A value of 50 gives approximately the same output level for all the voices. Values less than 50 increase the level of the lower voicings compared to the higher voicings, while values over 50 increase the level of the higher voicings compared the lower voicings.
<b>Variation</b>	<p><b>When the musIQ™ button is lit:</b>  1 MUSIQ MAIN</p> <p>2 MUSIQ ALT</p> <p><b>When the musIQ button is NOT lit:</b>  1 KEY VAR1  2 KEY VAR2  3 KEY VAR3</p>	<p>The main musIQ harmony mode.</p> <p>This is an alternate musIQ mode that follows the melody note changes in the lead more than the main mode. For some songs, this mode will produce an interesting alternative to the main musIQ mode, but because it is more aggressive in following the lead melody, it can also produce some unexpected harmonies.</p> <p>Each key variation (KEY VAR) selects a scale that sounds correct with your song. The difference between the 3 Major or 3 Minor scales is fairly subtle and may not be obvious right away but, for some songs, one scale will sound “right” where another might not. Whether a certain scale “works” or not depends on what note you sing in relation to the key you have chosen.</p>
<b>Voice Styles</b>	1 VST TIME 2 VST TM PCH 3 VST ONSET 4 VST GOSPEL 5 VST MIXED 6 VST GALS 7 VST GUYS 8 VST DRUNK	<p>Time decoupling. Harmony voices begin and end with varying delays relative to the lead vocal.</p> <p>Pitch and time decoupling. Harmony voices vary slightly in pitch as well as timing.</p> <p>Pitch and time decoupling with onset scoops.</p> <p>Pitch and time decoupling with onset scoops and vibrato.</p> <p>When there is more than one harmony voice on, this style sends a mix of the first four styles to the individual harmony voices.</p> <p>Gender modified to make harmonies sound more feminine.</p> <p>Gender modified to make harmonies sound more masculine.</p> <p>Extreme pitch and time decoupling.</p>
<b>Style Amount</b>	VSTYLE AMT	Determines the amount of voice style applied to the harmony. Range: 0-99

## Reverberation

Reverb affects both the processed vocal signals and harmonies as well as the Guitar Mix, as set with the Guitar Mix Reverb Level (see below). There are five reverb types (Studio, Club, Hall, Stadium, and Coarse), each reflecting different decay times and diffusion settings. Reverb can be bypassed by setting the Reverb Type to `RVB OFF`.

<b>Type</b>	1 <code>RVB OFF</code> 2 <code>RVB STUDIO</code> 3 <code>RVB CLUB</code> 4 <code>RVB HALL</code> 5 <code>RVB STAD</code> 6 <code>RVB COARSE</code>	Reverb is turned off. Sounds like reverb in a recording studio. Sounds like reverb in a medium sized club. Sounds like reverb in a concert hall. Sounds like reverb in a stadium. This reverb style is similar to studio, except there is less diffusion in the reverb tail, producing a coarse grainy sound.
<b>Level</b>	<code>RVB LEVEL</code>	Adjusts the amount of reverb applied to the lead vocals and harmonies. Range: 0-99
<b>Tone</b>	<code>RVB TONE</code>	Adjusts the tone of the reverb. Range: 1-5
<b>Pre-Delay</b>	<code>RVB PREDEL</code>	Determines the amount of pre-delay. Range: 0-9
<b>Decay Adjust</b>	<code>RVB DECAJ</code>	Increases or decreases the rate at which the reverb decays. Range: 1-99

## Delay

Delay affects the processed vocal signals. Delay can be bypassed by setting the Delay Type to `DELAY OFF`.

<b>Type</b>	1 <code>DELAY OFF</code> 2 <code>DELAY MONO</code> 3 <code>DELAY ALT1</code> 4 <code>DELAY ALT2</code> 5 <code>DELAY ALT3</code>	Delay is turned off. This style produces a pan-center echo. The three <code>ALT</code> styles produce variations of ping-pong echos that alternate between the left and right channel.
<b>Level</b>	<code>DELAY LEVEL</code>	Adjusts the level of the echo effect heard in the output. Range: 0-99
<b>Damping</b>	<code>DELAY DAMP</code>	Controls how damped (lowpass filtered) the echos sound. Range: 0-99
<b>Time</b>	<code>DELAY TIME</code>	Controls the delay between the echos. Range: 1-70
<b>Feedback</b>	<code>DELAY FBCK</code>	Controls how much of the echo is fed back into the delay line. If this parameter is set high, then the level of each consecutive echo drops very little. Range: 0-99

## Guitar Mix

Guitar Mix affects the amount of Guitar signal that is processed through the two guitar effects. The guitar effects are Reverb and Mod. The Reverb is shared with the main Vocal and Harmonies; hence the only parameter for the guitar is `GTRRVB_LVL` (Guitar Reverb Amount). Reverb settings are programmed in the Reverb row. Reverb can be bypassed by setting the `GTRRVB_LVL` to zero. If Reverberation Type is `OFF` in the Reverberation row, then the Studio Type is used by default.

The Mod effects refer to Chorus and Flange effects that are programmed in the Guitar Mix row. Mod Effects can be bypassed by setting the `GMOD_Type` to `GMOD_OFF`.

<b>Reverb Level</b>	<code>GTRRVB_LVL</code>	Determines the amount of reverb applied to the guitar signal. Range: 0-99
<b>Mod Type</b>	<code>1 GMOD OFF</code> <code>2 GMOD CHORM</code> <code>3 GMOD CHORS</code> <code>4 GMOD FLANG</code> <code>5 GMOD TREM</code>	Turns the modulated effect off. Mono chorus. Stereo chorus. Flanger. Tremolo.
<b>Mod Amount</b>	<code>GMOD_AMT</code>	Adjusts the level of the mod effect heard in the output. Range: 0-99
<b>Mod Speed</b>	<code>GMOD_SPEED</code>	Adjusts the speed of the modulation. Range: 1-99
<b>Mod Feedback</b>	<code>GMOD_FBCK</code>	Controls the feedback on the delay line for chorus and flange. Does not affect the Tremolo modulation type. Range: -19 to 19

## Utility Parameters

The Utility parameters are accessed by simultaneously pressing the **Edit Up/Down** arrow keys in the **Effects Matrix**. The main display will show *UTILITY* and the Numeric Display flashes *U*. Once this occurs, each knob controls the value of a particular system parameter, as shown below.

<b>FX Foot-switch Control</b>	1	<i>FXFS ALL</i>	<b>When the Effects LED is off:</b> All effects are disabled: Preamp, Comp/Gate, EQ, Pitch Correction, Lead Effects, Reverberation, Delay, and Guitar Mix.
	2	<i>FXFS MOST</i>	All vocal effects are disabled except reverb, comp/gate and EQ.
	3	<i>FXFS -DIS</i>	All vocal effects are disabled except distortion.
	4	<i>FXFS -CMP</i>	All vocal effects are disabled except compression.
	5	<i>FXFS -EQ</i>	All vocal effects are disabled except EQ.
	6	<i>FXFS -RVB</i>	All vocal effects are disabled except reverb.
<b>Harmony Foot-switch Control</b>	1	<i>HARMFS TOG</i>	Harmony toggles on and off when you hit the footswitch.
	2	<i>HARMFS MOM</i>	Harmony comes on only when you hit the footswitch and then goes off as soon as you release the footswitch.
<b>Guitar Sensitivity</b>	1	<i>GTRSENS LO</i>	Low guitar sensitivity - used for most guitars.
	2	<i>GTRSENS HI</i>	High guitar sensitivity - used for older guitars with weak output levels.

<b>Expression Pedal Controls</b>	1	<i>EP=NONE</i>	Expression pedal is disabled	13	<i>EP=MOD SPD</i>	Voice Mod Speed
	2	<i>EP=HRM LVL</i>	Harmony Level	14	<i>EP=HRM BAL</i>	Harmony Balance
	3	<i>EP=GTR LVL</i>	Guitar Level	15	<i>EP=RVB LVL</i>	Reverb Level
	4	<i>EP=PREGAIN</i>	Pre-amp Gain	16	<i>EP=RVB DCY</i>	Reverb Decay
	5	<i>EP=BND RES</i>	Band Resonance	17	<i>EP=DLY LVL</i>	Delay Level
	6	<i>EP=BND CEN</i>	Band Center	18	<i>EP=DLY DMP</i>	Delay Damping
	7	<i>EP=BASS</i>	Bass	19	<i>EP=DLY TIM</i>	Delay Time
	8	<i>EP=MIDGAIN</i>	Mid Gain	20	<i>EP=DLY FBK</i>	Delay Feedback
	9	<i>EP=TREBLE</i>	Treble	21	<i>EP=GTR RVB</i>	Guitar Reverb Amount
	10	<i>EP=PC AMT</i>	Pitch Correct Amount	22	<i>EP=GMOD AM</i>	Guitar Mod Amount
	11	<i>EP=PER AMT</i>	Persona amount	23	<i>EP=GMOD SP</i>	Guitar Mod Speed
	12	<i>EP=MOD AMT</i>	Voice Mod Amount	24	<i>EP=GMOD FB</i>	Guitar Mod Feedback

**Note:** The settings for FX Footswitch Control, Harmony Footswitch Control and Guitar Sensitivity apply to ALL presets. The setting for the Expression Pedal Control applies to the current preset only. If you modify the Expression Pedal setting and wish to store it you must Store the preset (see page 11). When you load another preset, its setting for Expression Pedal Control will take effect.

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## Factory Reset

If you want to restore the Vocalist® Live 4 to the state it was in when first delivered, you can use the Factory Reset function. This will:

- Copy all Factory presets to the corresponding User presets, overwriting all changes you may have made to the user presets
- Restore the state of the Utility parameters to the factory defaults (*FXFS ALL, HARMFS TOG, GTRSENS LO*)
- Set the Stereo/Mono state to Stereo

### To perform a Factory Reset procedure

1. If you are editing a preset, press the **Up** or **Down** footswitch to exit edit mode.
2. Press and hold the **Major/Minor** button and then press and release the **Store** button. The display will read *FAC RESET- WILL ERASE ALL YOUR PRESETS . . .*, then *STORE=RST*.
3. Press the **Store** button again to continue with the factory reset. If you don't want to do the factory reset, just wait 5 seconds, or press almost any other button, to cancel.

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# Troubleshooting

## **I don't hear any sound coming from the Vocalist® Live 4.**

- Make sure the power supply is plugged in to both the Vocalist Live 4 and the power outlet.
- Make sure the guitar amp, P.A. system, or mixer is plugged in and turned on.
- Make sure the guitar amp, P.A. system, or mixer volume levels aren't turned all the way down.
- Make sure the guitar volume isn't turned all the way down, and the microphone isn't turned off (if it has an on/off switch).
- Make sure the Mic/Line Input Level knob isn't turned all the way down.
- Make sure all the cables are completely plugged into their proper places (see pages 7 through 10 for instructions and diagrams).

## **The harmonies aren't tracking properly.**

- Make sure the Guitar Signal LED is green or amber while playing (see Setting the Guitar Level on page 13 for more information).
- Tune the guitar with the Vocalist Live 4 tuner (see page 12).
- Make sure you're not in Tuner mode while singing.

## **The guitar signal is too quiet.**

- Turn up the volume on your guitar.
- Make sure the guitar cable is properly connected to the guitar and the Vocalist Live 4.

## **The guitar signal is too loud.**

- Turn down the volume on your guitar.
- Turn down the Guitar Level knob.

## **The lead vocal is too quiet.**

- Turn up the Vocal Level knob.
- Turn up the Mic/Line Input Level knob.
- If you're using a P.A. system or mixer, turn up the channel that the Vocalist Live 4 is connected to, or turn up the master level (volume) controls.
- Try singing closer to the microphone.

## **The lead vocal is too loud.**

- Turn down the Vocal Level knob.
- Turn down the Mic/Line Input Level knob.
- If you're using a P.A. system or mixer, turn down the channel that the Vocalist Live 4 is connected to, or turn down the master level (volume) controls.

## **I don't hear any harmonies, or the harmonies are too quiet.**

- Make sure the Harmony footswitch is pressed so that the LED just above it is lit.
- Turn up the Harmony Level knob.
- Make sure the Voicing parameter (in the Harmony row of the Effects Matrix) is not set to *OFF*.

## **The harmonies are too loud.**

- Turn down the Harmony Level knob.

## Preset List

1	3RD ABOVE	A simple 3rd above your lead vocal. Great for 60s duet folk songs. Utilizes a stereo chorus effect for the guitar.
2	3RD BELOW	The same preset as #1 but now the harmony is a 3rd down from the lead vocal.
3	3RD DN UP	Features harmonies a 3rd above and below your lead voice.
4	CSN	Contains three part harmony: your lead vocal and a 3rd and 5th above to create a triad. Notice that VST GALS is used for the voice style. Female vocalists should probably use VST GUYS to keep the harmonies sounding natural and not too high.
5	GALS GUYS	Uses a 5th down and a 5th up to create male/female harmonies.
6	BLIND BOYS	Very gospel-like, and utilizes a 5th down, 3rd down, 3rd up and 5th up. Including your voice, you have 5 part harmony. The lead vocal effect is a bigger persona to give you a huskier older male vocal.
7	TAKE 5	Feels like a jazzy vocal group. Uses a 5th down, 3rd down, 3rd up, and 5th up plus your voice to create 5 part harmony. It also uses the <i>musiQ™</i> Alt harmony variation feature to sound jazzier.
8	BASS ALTOS	Covers the lower ranges of male vocals with an Octave down, 5th down and a 3rd down from the melody vocal (your voice). Also uses a stereo chorus effect on the guitar.
9	TENORS	Covers the middle and higher ranges of male vocals with a 5th down, 3rd down and a 3rd up from the melody vocal. Also uses a mono chorus effect on the guitar.
10	LITE WORLD	Utilizes three part harmony (3rd above / 5th above) with a unison vocal to help thicken your voice. Also uses a stereo chorus effect on the guitar. Chromatic pitch correction is used.
11	CAN WE STL	This preset and the next one both use female backing vocals, a 3rd down (doubled) and a 3rd above (doubled), and a stereo chorus effect on the guitar. Try using it on the verses of a song. Chromatic pitch correction is used.
12	BE FRIENDS	Covers a higher vocal range with a 3rd above, 5th above and an octave above. Also uses a stereo chorus effect on the guitar. Try using this preset on the “la la la” part of a song.
13	ALT HRMNY	Uses the ALT variation again with a 5th below, 3rd below, 3rd above and 5th above, and some pitch and timing variations.
14	BIG GOSPEL	Offers a different variation of gospel backgrounds than the BLIND BOYS preset. It doubles the 3rd below and 3rd above to fatten up your sound. It also uses the bigger persona to give you a huskier older male lead vocal. Chromatic pitch correction is used and a tremolo effect is used on the guitar.
15	PURPLE RN	Uses a thicker stereo chorus effect on the guitar and a smaller younger lead vocal effect. Utilizes a mixture of male and female background vocals with doubled 3rds below and 3rds above.
16	BIG GUY	The ultimate blues singer preset. Great for singing bar-room blues and R&B standards with that big blues voice.
17	4 UNISONS	Takes all the harmony voices and puts them to unison to create a fat thickening effect.

18	EAGLETS 2	Reminiscent of 2-part 70s country-rock vocals. Try singing with your best country vocal. Utilizes a 3rd above. A mono chorus effect is used on the guitar.
19	EAGLETS 3	Reminiscent of 3 part 70s country-rock vocals. Utilizes a 3rd above and a 5th above as well as a unison to help thicken the lead vocal. A mono chorus effect is used on the guitar.
20	DUST WIND	A 2-part harmony good for well-known acoustic duet hits from the 70s and 80s. Utilizes a timing variation on the 3rd above harmony.
21	GOLD CHAN	A smooth, fat 3-part vocal sound using a 3rd above, 5th above and an octave above. A stereo chorus effect is used on the guitar.
22	KISS	Perfect for singing falsetto parts while still maintaining a male vocal sound. Try singing in falsetto for the verse and singing the chorus in full voice. 3 part harmony (3rd and 5th above and an octave above) is used. A stereo chorus effect is used on the guitar.
23	ALT GOSPEL	Similar to the BIG GOSPEL preset, but uses the musIQ™ Alt harmony style to get slightly different voicings. Also, there is no tremolo on the guitar this time.
24	GTR CHORUS	Demonstrates a nice stereo guitar chorus effect with reverb. Try experimenting with the speed and feedback parameters to get the sound you're looking for. The harmony is a single unison voice that is chromatically pitch corrected to give an interesting doubled sound.
25	GTR TREM	Demonstrates a guitar tremolo effect with reverb. Play around with the speed and feedback parameters to customize your sound. The harmony has unison, octave down and octave up voices.
26	GTR FLANGE	Demonstrates a guitar flange effect reverb. The harmonies are unison plus 3rds and 5ths up.
27	7 BRIDGES	Excellent for songs with multi-layered a cappella harmonies. Features 3rd down, 3rd up and 5th up, as well as some fairly strong harmony voice decoupling.
28	OCTAVES	Uses octave doubling for the harmonies. The unison voice is combined with the lead vocal shifted up and down one octave.
29	GALS DUET	Makes a male lead singer sound female. The harmony voice sounds like a female singer singing up one octave from the lead.
30	LOOSE DBLS	Creates a fat doubling by combining 4 unison voices with lots of decoupling.
31	TUBE GOLD	Models a studio vocal channel using the tube amp, compressor and EQ to create a sound that will sweeten any vocal.
32	PCA MAJOR	Demonstrates major-scale pitch correction that can make even the most vocally-challenged singers sound good. Set the key and scale in the pitch correction row to match your song (this preset is set to A Maj). The faster you set the rate, the harder it will be to sing off key!
33	BANDERO	Provides a band limited voice that is often heard as a vocal effect.
34	RADIO	Combines a tube preamp with band limiting to create an old radio lead vocal effect.
35	BORG	Creates a metallic sounding lead effect.
36	BIGGER	Makes your lead voice sound larger. Try playing with the "amount" parameter in the Lead Effects row to become just the size you want.

37	SMALLER	Similar to BIGGER, but works in the opposite direction.
38	GIANT	Combines a bigger voice with an octave down shift.
39	ELF	Combines a smaller voice with an octave up shift.
40	VIB SLOW	Adds a slow vibrato to your voice during sustained vocal sections.
41	CHORUS	Adds a stereo chorus effect to the lead vocal.
42	TUBEFLANGE	Uses the tube pre-amp with flange lead effect to create a surreal lead vocal effect.
43	ROBO	Reduces the variation of your pitch contour to create a robotic lead vocal effect.
44	CHIPMUNK	Has a large female gender shift combined with an octave up pitch shift.
45	STUTTER	Adds a stutter effect to the lead vocal.
46	TREMOLO	Adds a tremolo effect to the lead vocal.
47	PING PONG	Demonstrates a stereo ping pong delay effect.
48	BOB	Demonstrates large pitch onset effects. Try it while singing your favorite 60s solo folk songs.
49	ELVIS	Demonstrates a slow ballad sound, with strong stylized vibrato and slow pitch scooping at note onsets.
50	GTR LESLIE	Demonstrates a swirling guitar effect.

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# Specifications

Frequency Response:	Line Level Inputs and Outputs +0, -3dB 30Hz to 20kHz
Distortion (THD+IMD):	Line-Level Inputs to Line-Level Outputs < 0.03% Input Level at max, 0dBu 1kHz tone.

## Analog Inputs

Guitar Input and Thru Connectors:	¼" unbalanced TS connectors
Max input level:	3.4 Vrms
Impedance:	3M Ohms unbalanced

Mic Input Connector:	XLR female
Max input level, gain at max:	-27dBu (-12.5dBu in limit)
Max input level, gain at min:	-1.5dBu
Impedance:	1.3k Ohms balanced

Line Input Connector:	¼" unbalanced TS connector
Max input level, gain at max:	-8dBu (+5.5dBu in limit)
Max input level, gain at min:	+18.5dBu
Impedance:	12k Ohms unbalanced

Aux Input Connector:	3.5mm unbalanced stereo TRS connector
Impedance:	33k Ohms unbalanced

## Converters

24-bit Analog to Digital Converter	
Dynamic Range:	>97dB, A-weighted, -60dB fullscale input
Crosstalk:	-85dB @ 1kHz
Sample Rate:	44.1kHz

24-bit Digital to Analog Converter	
Dynamic Range:	>110dB, A-weighted, -60dB fullscale input
Crosstalk:	-130dB @ 1kHz
Sample Rate:	44.1kHz

## Analog Outputs

Line Outputs Connectors:	¼" balanced/unbalanced TRS, XLR balanced
Max output level:	+19.9dBu balanced, +13.9dBu unbalanced
Impedance:	1560 Ohms balanced, 780 Ohms unbalanced
Dynamic Range:	>102dB, A-weighted
THD+N:	< 0.03% @ 1kHz

Headphone Output Connector:	3.5mm unbalanced stereo TRS connector
Max output level:	+12.6dBu
Impedance:	10 Ohms

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Expression Pedal:	The Vocalist® Live 4 can use either a standard passive guitar volume pedal or a resistance-based expression pedal. If using a standard guitar volume pedal, it should use a 250 kOhms or higher pot. If using an expression pedal, it must offer a TRS connection and offer a minimum resistance of 10kOhms.
Signal Processing:	Freescale DSP56367 DSP with custom firmware. All signal processing takes place at 44.1KHz sample rates, native.
Power:	US and Canada: 120 VAC, 60 Hz Adapter: PS0913B-120 Japan: 100 VAC, 50/60 Hz Adapter: PS0913B-100 Europe: 230 VAC, 50 Hz Adapter: PS0913B-230 UK: 240 VAC, 50 Hz Adapter: PS0913B-240
Dimensions:	8.25" Length x 14.18" Width x 2.08" Height
Weight:	Approximately 3.3 lbs.
Environment:	Operating Temp: 32-104 degrees F, (0-40 C)



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