GS MUSIC

e7

USER MANUAL

INDEX

CREDITS AND ACKNOWLEDGMENTS

We hope you enjoy the beautiful **e7**. We feel great joy and excitement to have created the **e7** synthesizer, the first polyphonic and multitimbral analog synthesizer made in Argentina. Elena Epuin Guido Salaya Buenos Aires, Argentina, 2022

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We encourage you to read the entire manual in order to learn more about the instrument and for a better understanding of what you can do with the **e7**.
Be careful when unpacking and transporting this instrument.
Be sure to save the box and all packing material in case you need to ship it for any reason.

INTRODUCTION

With our greatest gratitude, from GS Music we thank you and congratulate you for purchasing our new **e7** polyphonic synthesizer. This instrument is the result of years of research and development dedicated to bring you the first polyphonic analog synthesizer created in Argentina.
The **e7** will give you the chance to explore endless sonic possibilities that will hopefully inspire you to create and enjoy. You will also be able to store more than 600 presets and thus generate your own sound bank.
We imagine that you are excited to start experimenting with the sounds that the **e7** has to offer. We encourage you to take the time to read this manual and get an in-depth understanding of what you can do with this synthesizer.

SAFETY INSTRUCTIONS

PLEASE READ BEFORE USING THIS PRODUCT
When using the **e7**, these basic precautions must be followed:

- Read the manual carefully before operating this product.
- Do not use the **e7** near water or heat sources.
- Connect the **e7** to the power supply included in the box or one with the same specs.
- Unplug the equipment if it will not be used for an extended period of time.
- In the event of equipment failure, do not open the equipment or attempt to repair it yourself. Contact **GS Music Technical Service**.

INSIDE THE BOX

Inside the box you will find the following items:
- **GS Music e7** polyphonic analog synthesizer
- A DC 12V 3A power supply
- A user's manual

SETUP AND CONNECTIONS

Beside from what is included in the box, you may need the following:

- A MIDI cable (DIN-5)
- A MIDI controller or keyboard
- A USB cable to connect the unit to a computer (USB MIDI)
- A TS or TRS ¼" audio cable and an amplifier or a pair of headphones.

Connect the power supply included in the box to the DC 12 V connector at the back of the unit. This power supply will work properly as long as it is connected to a voltage of 100 to 240 V AC, 50 to 60 Hz.

Connect the MIDI cable between the MIDI OUT port of your MIDI controller or keyboard and the MIDI IN port of the **e7**. The **e7** is set up to receive MIDI messages on channel 1 by default. If you wish to use a computer to send MIDI information to it, plug one end of a USB cable into the USB port at the rear panel of the unit and the other into your computer. Additionally, you can control the synthesizer via CV.

Finally, connect the **e7** to an amplifier or mixer using a TS or TRS ¼" cable or a pair of headphones.
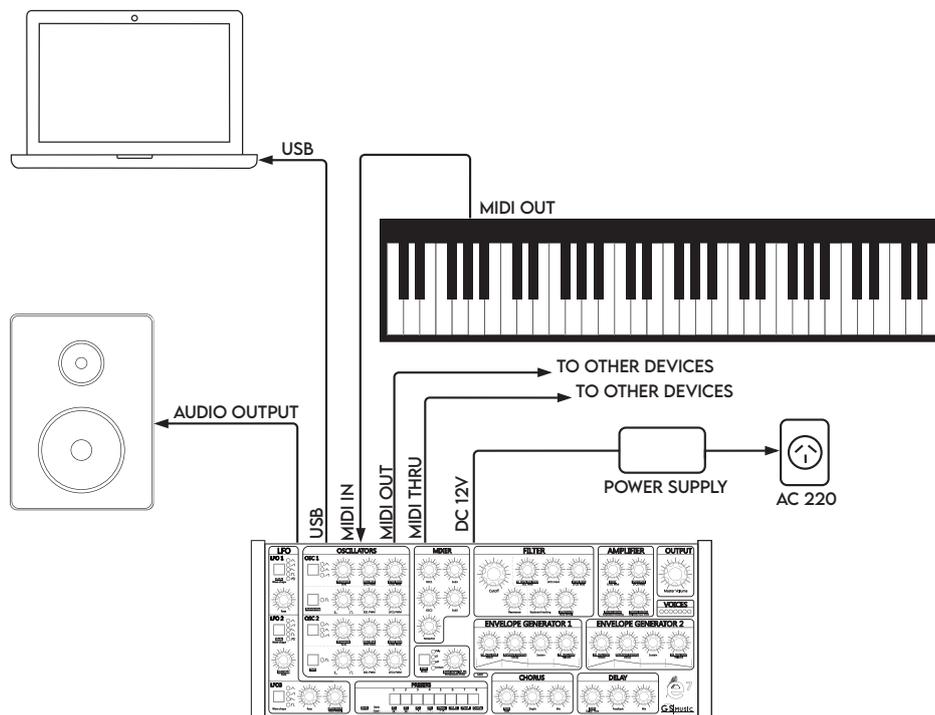

Basic connections.

OVERVIEW AND FEATURES

The **e7** is an analog subtractive synthesizer with up to seven voices of polyphony. In addition, it offers the possibility of distributing the seven voices in four different Parts, thus achieving a multitimbral synthesizer. All settings can be stored in more than 600 presets.

The audio generation as well as the signal path is 100% analog. This synthesizer features two ultra-stable analog VCOs per voice, a white noise generator and an external audio input. The control signals are digitally generated, including three low-frequency oscillators (LFOs) and two ADSR-type envelope generators (EGs) per voice. In addition, it incorporates an effects processor with Chorus and Delay.

The *e7* synthesizer allows you to intuitively access a wide variety of functions in a limited number of knobs and buttons. In this way, we guarantee to give you the greatest possible features in a small, lightweight and easy-to-use device.

FRONT PANEL
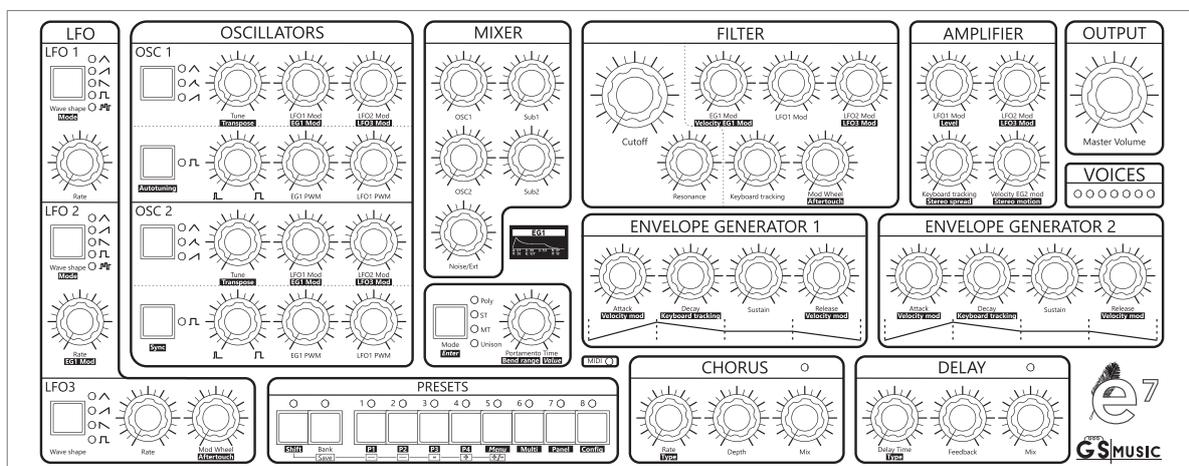
OSCILLATORS (VCO)

Two voltage-controlled oscillators (VCOs) that generate Triangular, Tri-Saw, and Sawtooth waveforms. In turn, each one is linked to a variable pulse width generator.

MIXER

The mixer allows you to adjust each oscillator and its associated sub-oscillator level. You can also mix the noise generator or the external audio input.

FILTER (VCF)

A low-pass voltage-controlled filter (VCF) with a 24 dB/Oct slope and resonance control.

AMPLIFIER (VCA)

The amplifier is the section that allows you to control the dynamics of the amplitude of the resulting audio signal.

ENVELOPE GENERATORS (EGs)

Two ADSR-type envelope generators (EGs). EG1 is oriented to control the filter cutoff frequency. The EG2 is oriented to control the amplifier. However, both EGs can also modulate several other parameters simultaneously.

LOW-FREQUENCY OSCILLATORS (LFOs)

The *e7* has three low-frequency oscillators (LFOs). These oscillators generate periodic waveforms whose frequency is usually below the audible range. These are useful when you want to periodically vary a parameter.

EFFECTS

The *e7* is capable of processing the audio generated with Chorus and Delay.

OUTPUT

Master volume control.

REAR PANEL
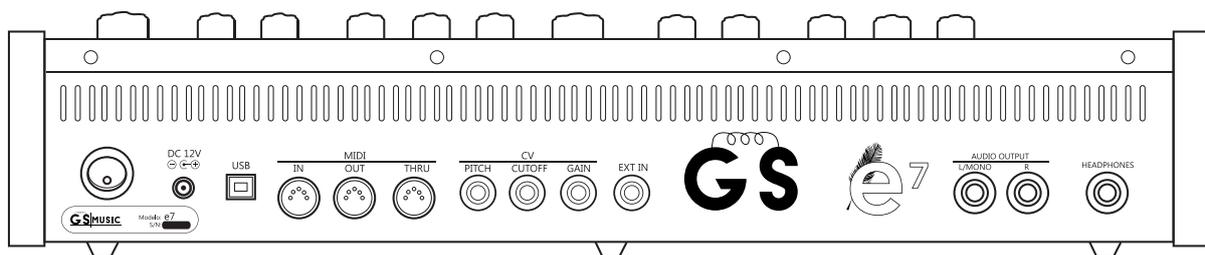
HEADPHONE OUTPUT

Stereo headphone output with TRS ¼" connector.

MAIN OUTPUT

Balanced Mono or Stereo (L/MONO, R) with TRS ¼" connector.

EXTERNAL INPUT

External audio input with TS ¼" connector.

CONTROL INPUTS

Control voltage (CV) inputs for controlling Pitch, Cutoff frequency and Gain.

MIDI

DIN MIDI and USB MIDI input and output to communicate the *e7* with external devices.

SIGNAL PATH
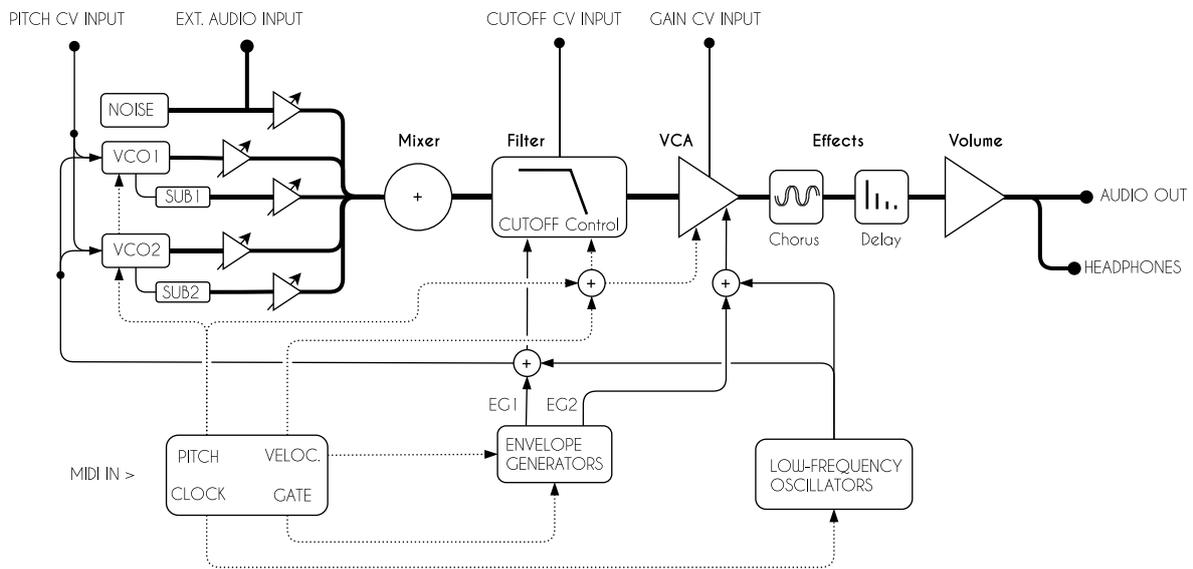
BASIC OPERATION

The **e7** responds to MIDI messages on both DIN and USB MIDI inputs. The **e7** has an LED that indicates activity on either the DIN MIDI or USB MIDI connector. In addition, **e7**'s knobs and buttons receive and transmit MIDI Control Change (CC) commands, allowing parameter adjustments to be captured by any MIDI-recording device and to control multiple parameters simultaneously from your computer.

COMPONENTS AND CONTROLS

Here we will tell you about the various parameters that you can control in each component of your synthesizer. You will notice that some of the knobs on your **e7** have two labels. These labels indicate the parameters to be controlled with the same knob or button: the main one and the alternative one (highlighted in white), which is accessed by pressing the **SHIFT** button beforehand. When you want to give up control over an alternative parameter, remember to press **SHIFT** again.

OSCILLATORS (VCOS)

The oscillator is the main sound source in a subtractive synthesizer. The **e7** features two oscillators designed to ensure minimal pitch variation over more than 7 octaves.

WAVEFORM SELECTOR

Selects the oscillator waveform.

You can choose between three waveforms: Triangular, Tri-Saw and Sawtooth. A light will indicate which waveform is selected. If no indicator is lit, no waveform has been selected.

In case you want to use only the pulse generator, make sure that none of the LEDs of the waveform selector are on.

TUNE

Adjusts the VCO frequency within a +/- ½ semitone range.

TRANSPOSE

Transpose +/- 24 semitones range (2 octaves) the note played by the oscillator in relation to the note sent by MIDI or CV.

LFO1 MOD

Sets the amount of modulation from the LFO1 to the VCO the pitch.

EG1 MOD

Sets the amount of modulation from the EG1 to the VCO pitch.

LFO2 MOD

Sets the amount of modulation given by the LFO2 to the VCO pitch.

LFO3 MOD

Sets the amount of modulation from the LFO3 to the VCO pitch.

PULSE GENERATOR

Switches the pulse generator ON.

To play this waveform only, you will need the main selector indicator to be OFF.
In case both are ON, both waveforms will be mixed at the same level.

AUTOTUNING (1)

Execute the synthesizer's auto tuning calibration. This process takes about two seconds.

The self-calibration algorithm considers the applied voltage at the PITCH CV input. If you want a 0V input to correspond to no modulation, it is recommended that you disconnect any signal from this input. The algorithm is also capable of adjusting the tuning based on some preferred voltage in the 0 to 5V range applied to this input.

SYNC (2)

Synchronizes both oscillators in "Hard Sync" mode.

PULSE WIDTH

Sets the pulse width between 10% and 50% duty cycle.

EG1 PWM

Sets the amount of pulse width modulation from the EG1.

LFO1 PWM

Sets the amount of pulse width modulation from the LFO1.

MIXER

Mixes the oscillators, the sub-oscillators and the white noise or external input.

> Each sub-oscillator is derived from its associated oscillator. It has a square waveform and half the oscillator frequency (one octave lower).

OSC1

Sets the Oscilator1 level.

SUB1

Sets the Sub-oscillator 1 level (derived from OSC1).

OSC2

Sets the Oscilator 2 level VCO2 level.

SUB2

Sets the Sub-oscillator 1 level (derived from OSC2).

NOISE/EXT

Adjusts the noise generator or external signal level.

> The **e7** has an external audio input on the rear panel. Here you can connect any instrument or line level signal. The noise generator is disabled when an external signal is connected.

FILTER (VCF)

A subtractive synthesizer takes this name because it is based on the generation of complex waveforms (with high harmonic content) that are then attenuated or "erased". The filter is in charge of shaping these waveforms, subtracting energy from the different harmonics of the signal.

The *e7* has a 24 dB/oct low-pass filter, which means that it can attenuate the level of harmonics above a particular frequency. This filter has resonance control, which allows you to increase the level at frequencies close to the cutoff frequency.
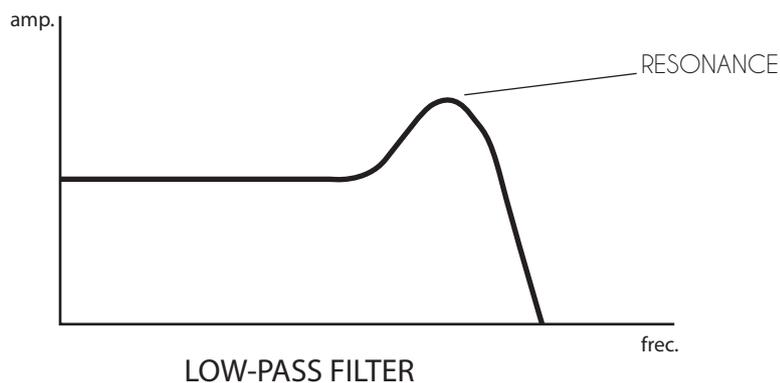
LOW-PASS FILTER

CUTOFF

Adjusts the low-pass filter cutoff frequency from 10 Hz to 25 kHz.

RESONANCE

Sets the amount of emphasis around the cutoff frequency.

By setting the RESONANCE level to its maximum, the filter will begin to oscillate. This is useful if you want to obtain a sine-like waveform, commonly referred to as "pure tone."

EG1 MOD

Sets the amount of cutoff frequency modulation from EG1.

VELOCITY EG1 MOD

Sets the amount of velocity-dependent cutoff frequency modulation from EG1.
EG1 is intended to control the filter cutoff frequency (CUTOFF). If you assign a value to this parameter, the filter cutoff frequency will be affected by your controller Velocity.

LFO1 MOD

Sets the amount of modulation from the EG1 to the cutoff frequency.

LFO2 MOD

Sets the amount of modulation from the LFO2 to the cutoff frequency.

LFO3 MOD

Sets the amount of modulation from the LFO3 to the cutoff frequency.

KEYBOARD TRACKING

Determines how the Filter cutoff changes within the whole notes range.

> By setting this parameter to a non-zero value, the cutoff frequency will vary with the pressed key on your controller. This is useful in case you want the "brightness" of the higher notes to be similar to that of the lower notes. When set to the minimum position, the cutoff frequency will be the same no matter which key note is pressed.

MOD WHEEL

Sets how much the modulation wheel affects the cutoff frequency.

AFTERTOUCH

Sets how much the cutoff frequency varies with Aftertouch.

AMPLIFIER (VCA)

In this section you can control the amplitude behavior. You can also add some stereo spatiality.

LFO1 MOD

Sets the amount of amplitude modulation from the LFO1.

LEVEL

Sets the level of the audio signal before the effects section.
If the synthesizer is configured to operate as a multitimbral synthesizer (Page 21), this parameter controls the level of the selected Part.

LFO2 MOD

Sets the amount of amplitude modulation from the LFO2.

LFO3 MOD

Sets the amount of amplitude modulation from the LFO3.

KEYBOARD TRACKING

Sets the degree to which the
amplitude follows the keyboard.

STEREO SPREAD

Sets the stereo position of the seven
polyphony voices.
When the knob is in its center position, all
voices will be heard with equal amplitude
on the left and right channels. As the pot
is moved to the extremes, the voices will
be distributed from left to right.

> When set to an anticlockwise position, voices 1-3 are progressively oriented to the right
> channel and voices 5-7 to the left channel. Contrary, when set to a clockwise position,
> voices 1-3 are progressively oriented to the left channel and voices 5-7 to the right channel.

VELOCITY EG2 MOD

Sets the degree to which the amplitude of the EG2 depends on the Velocity
value.

The EG2 is intended to control the amplitude of the signal. By assigning a
non-zero value to this parameter, the amplitude will depend on how hard you
press a key on your controller.

STEREO MOTION

Adjust the motion between left and right channels for the seven voices
of polyphony.

> Assigning a value to this parameter will allow you to modulate the arrangement in the stereo
> image of the different voices. The modulation frequency is fixed.
> The movement will be relative to the STEREO SPREAD value. In order to get the maximum stereo
> motion, Stereo Spread should be at the center position.

ENVELOPE GENERATORS (EGs)

The **e7** has two ADSR-type Envelope Generators (EGs). ADSR stands for Attack, Decay, Sustain and Release.

Attack refers to the time it takes to the Envelope to reach its maximum value. Decay refers to the time it takes to reach the Sustain level once it reaches the maximum. The Sustain level will remain constant as long as a key is pressed. When released, the Release control sets the time it takes to the EG to turn off.

SUSTAIN

ADSR

ATTACK   DECAY   RELEASE

GATE PULSE
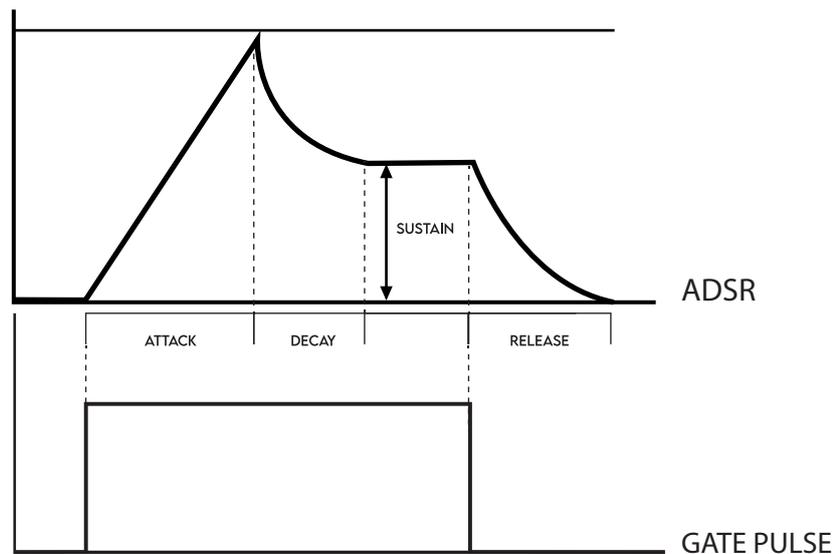
ATTACK

Sets the ATTACK time.

VELOCITY MOD

Sets how much the Velocity modifies the ATTACK time.

If you assign a value to this parameter, the harder a key is pressed, the faster the envelope will reach its maximum value.

DECAY

Sets the DECAY time.

KEYBOARD TRACKING

Sets the degree to which the EG times follow the note played on the keyboard, affecting ATTACK, DECAY and RELEASE.

> The vast majority of acoustic instruments (guitars, pianos, etc.) have different amplitude dynamics depending on the note played. In nature, high-pitched sounds are usually perceived shorter. With this control, you can simulate this phenomenon.

SUSTAIN

Sets the SUSTAIN level.

RELEASE

Sets the RELEASE time.

VELOCITY MOD

Sets how much the Velocity modifies the RELEASE time.
The harder you press a key, the shorter the RELEASE time will be.

LOW-FREQUENCY OSCILLATORS (LFOs)

LFOs 1 and 2 allow six different synchronism Modes.
LFO3 has the particularity that its amplitude is zero by default. To increase its amplitude, you will need to use the modulation wheel (MODWHEEL) or Aftertouch.

WAVESHAPE

Selects the waveform of the LFO.

You can choose from Triangular, Ascending Ramp, Descending Ramp, Pulse and S&H (Sample & Hold) -only for LFO1 and LFO2-.

MODE (1 & 2)

The LFOs 1 & 2 have six different modes of synchronization:

Monophonic: The LFO is in phase for all of the voices.

Polyphonic: The LFO is generated to a slightly different frequency for all of the keys pressed. This allows an interaction of the phases, generating more complex modulations.

Keyboard Tracking (KB Tracking): The LFO frequency varies according to the note played following the chromatic scale. The frequency indicated on the display is the frequency assigned to the last note played.

Keyboard Sync (KB Sync): The phase of the LFO applied to each of the voices is different if more than one key are pressed in different moments, still their frequency will be the same. The phase of the LFOs will be the same when multiple keys are pressed at the same time.

Clock Sync: The frequency of the LFO is synced to the MIDI clock signal. The **e7** automatically detects the BPM of the clock signal.
It can be configured to generate different rhythmic figures:
Whole Note, Dotted 1/2 Note, Whole Note Triplet, 1/2 Note, Dotted 1/4 Note, 1/2 Note Triplet, 1/4 Note, Dotted 1/8 Note, 1/4 Note Triplet, 1/8 Note, Dotted 1/16 Note, 1/8 Note Triplet, 1/16 Note, 1/16 Note Triplet, 1/32 Note.
If the **e7** does not detect any clock signal, the default tempo is 120 BPM and it can't be modified.

Keyboard + Clock Sync: The LFO frequency will be a sub-division of the MIDI clock signal. Also, the clock will be reset each time a key is pressed. The phase of the LFO will depend on when the key is pressed.

LFO 1
Frequency
8.67Hz

LFO 1
120.0 BPM

RATE

Sets the frequency of the LFO.

EG1 MOD (2)

Sets how much the EG1 modifies the frequency of the LFO2.

> This parameter works as long as the LFO Mode is configured to one different than Monophonic or Clock Sync.

MODWHEEL (3)

Sets the degree to which the modulation wheel affects the amplitude of LFO3.

AFTERTOUCH (3)

Sets the degree in which the Aftertouch affects the amplitude of the LFO3.

CHORUS

Chorus is a delay-based effect that provides a greater sense of spatiality by simulating what happens when different sources play the same note at slightly different pitches.
This is achieved by replicating the original sound several times and applying a small delay and slight detuning to each of these replicas.

RATE

Sets the modulation rate.

The time delay applied to the generated replicas is not static. On the contrary, they vary continuously over time. This control changes the variation rate, which is derived from an LFO within the effects processor.

TYPE

Selects the type of Chorus to use.

The *e7* Chorus has two algorithms for this effect: Basic and Ensemble. The Basic algorithm is subtle and allows you to add some spatiality to the resulting sound, while the Ensemble algorithm adds a different dimension to the sound, simulating a string or vocal ensemble.

DEPTH

Sets the intensity of the modulation.

Just as the speed of the internal LFO indicates the rate at which the replicas are detuned, the amplitude of the internal LFO influences how much the effect is perceived.

MIX

Mix between the dry or unprocessed signal and the wet or processed signal.

DELAY

DELAY TIME

Sets the delay time between the generated repetitions.

TYPE

Stereo: The repetitions are generated at the same time for the Left and Right channels in a range between 50 ms and 1.35 s.

Ping-Pong: The repetitions alternate between the left (L) and right (R) channel in a range between 50 ms and 1.35 s.

Stereo Sync: The repetitions are generated at the same time for the Left and Right channel and are synced to the MIDI Clock. The possible sub-divisions are the same as for the LFOs (Pg. 14).

Ping-Pong Sync: The repetitions occur alternately between the left (L) and right (R) channel and are synced to the MIDI Clock. The possible sub-divisions are the same as for the LFOs (Pg. 14).

FEEDBACK

Sets the amount of signal that is fed back from the DELAY output back into its input.

MIX

Mix between the dry or unprocessed signal and the wet or processed signal.

PORTAMENTO / POLYPHONY MODES

PORTAMENTO TIME

Sets the transition time between notes played and triggered by the same voice.

BEND RANGE / VALUE

Sets the range in semitones that the PITCH BEND wheel of your MIDI controller is capable of modulating.

This same knob can be used to toggle between options and/or values **within a configuration menu.**

MODE

Sets the polyphony mode.

The **e7** has up to seven voices of polyphony. The way in which the voices are treated can be configured in one of the following ways:

Polyphonic (Poly): Gives you the ability to trigger up to 7 voices simultaneously. Both EGs are triggered for each new note played.

Monophonic Single Trigger (ST): Allows a single note to be played at a time. The EGs are not retriggered if two notes are played legato.

Monophonic Multi Trigger (MT): Allows a single note to be played at a time. The EGs are retriggered for each new note played.

Unison Single Trigger (U + ST): Allows a single note to be played at a time but making use of all seven voices. Each of the voices is slightly detuned and the EGs are not retriggered if two notes are played legato.

Unison Multi Trigger (U + MT): Allows a single note to be played at a time but making use of all seven voices. Each of the voices is slightly detuned and the EGs are retriggered for each new note played.

This configuration is applicable to both a Simple and a Multitimbral Patch. The Unison Single Trigger and Unison Multi Trigger options are not available if you are working in a Multitimbral Patch.

Last note priority is used in Monophonic or Unison Modes.

ENTER

Confirms the variations made and jumps to the next setting within a configuration menu.

GLOBAL CONFIGURATION

In the Global Configuration Menu, you can set how the *e7* receives and transmits MIDI information, as well as reset the unit to its factory settings.

To access this menu, tap **Shift** followed by the 8 (**Config**) button.

RX/TX

Receive Channel (Rx. Ch.): You can choose from which channel(s) the *e7* receives MIDI information. You can select between channels 1 to 16 or the Omni option (enables reception of all MIDI channels).

Transmission Channel (Tx. Ch.): You can choose on which MIDI channel to send CC (Control Change) information. You can select between channels 1 to 16 or the Off option (completely disables sending information).

PB/PC/CC

Pitch Bend (PB): Enables or disables the PITCH BEND.

Program Change (PC): Enables or disables Program Change message reception.

Control Change (CC): Enables or disables the reception of Control Change messages.

CLK/MPE

Clock (CLK): You can choose from which source to take the clock signal. You can choose between USB or MIDI (DIN-5).

MIDI Polyphonic Expression (MPE): Enables or disables MIDI Polyphonic Expression mode. This setting is not compatible with a Multitimbral Patch.

> MPE is disabled when the e7 is turned off.

SOFT THRU 1

IN ➝ OUT: Replicates the MIDI information received at the MIDI IN port to the MIDIOUT port.

IN ➝ USB: Replicates the MIDI information received at the MIDI IN port to the USB output.

SOFT THRU 2

USB ➝ OUT: Replicates MIDI information received via USB to the MIDI OUT port.

USB ➝ USB: Replicates MIDI information received by USB to the USB output.

FACTORY RESTORE

Presets: Erases any preset saved by the user.

Config.: Restores to factory defaults any MIDI configuration and calibration.

All: Restore to factory defaults both presets and the global configuration.

To confirm the restoration, you need to confirm it by pressing button 1. Press any other button to cancel it.

> It is recommended to perform self-calibration of the oscillators tuning after restoring the configuration (Pg. 7).

PANEL MODE

The **e7** starts in Panel Mode. In this mode the resulting sound is the product of the front panel controls position. In case you are using a preset and would like to quickly return to Panel Mode, tap **Shift** followed by button 7 (**Panel**). Thereafter, you will hear the sound resulting from the current front panel controls positon.

If you are indeed in Panel Mode, pressing any of buttons 1 to 8 will initiate Preset Mode.

PRESET MODE

The **e7** allows you to store up to 512 Single Presets, including 56 factory presets.
First, we will explain how to navigate through the preset menus. Second, we will explain you how to save and edit your own presets. Each preset has a Name and a number assigned to it (Address). These addresses are in the form of X.Y.Z and can take values from 1.1.1 to 8.8.8. The first two digits refer to the Bank and the third to the Position.

Factory presets are registered in the addresses 1.1.1 to 1.7.8.

If you are in Panel Mode, pressing any of buttons 1 to 8 will initiate Preset Mode.

PRESET NAVIGATION

Buttons 1 to 8 allow you to directly change Position. For example, if you would like to use the preset called "Metal Flies" -which is located at Address 1.1.6- you can simply press the button 6.
Now, if you wanted to access a preset located in another Bank, you would tap **Bank** button, and then enter the Address of the Preset. For example, to access the preset called "Pulse Bass" -which is located in address 1.3.5-, you would tap the **Bank** button, followed by the buttons 1, 3 and 5.

PRESET MENU

You can edit preset global parameters by entering the Preset Menu. To do this, tap **Shift** followed by button 5 (**Menu**). The editing options are:

Transpose: you can transpose the pitch of the note(s) within a range of +/- 48 semitones.

```
Transpose
Transp:    -12
```

Voices: you can select which voices are activated when setting the Preset to either Monophonic or Polyphonic mode. The different options are the following:

Monophonic Mode:
- **Free**: any of the voices is chosen randomly.
- **1-7**: a particular voice is used.

```
Voices
Mono:      Free
Poly:       All
```

Polyphonic mode:
- **All**: the seven voices are available to use.
- **Even**: even voices are available (2-4-6).
- **Odd**: odd voices are available (1-3-5-7).
- **1→7**: Assignment is from left to right.
- **7→1**: Assignment is from right to left.

> When choosing any of the options above, have in mind that the stereo location of each voice might be different if STEREO SPREAD and/or STEREO MOTION is activated.

Copy preset: you can copy the configuration from an already saved preset. To do so, enter the address of the preset from which you want to copy its configuration. You will then be presented with the following options:

- **Patch**: copies the preset's configuration without considering the effects.
- **Patch + FX**: copy the entire preset configuration.
- **FX only**: copy the effects only.

Copy part: you can copy from a Multitimbral Preset (Pg. 21) part of its settings. Enter the address of the Multitimbral Preset and the Part you want to copy from. You will then be presented with the following options:

- **Patch**: copies the Part's configuration without considering the effects.
- **Patch + FX**: copy the entire Part configuration.
- **FX only**: copy the effects only.

> If at any time you decide to exit the Menu, press the **Shift** button.

SAVING PRESETS

To save a preset, you must first **press and hold** the **Shift** + **Bank/ Save** . Once you have done this, you will see the **Bank** indicator flash and you will be able to choose the address and name of the Preset.

CHOOSING AN ADDRESS

Enter the Address where you would like to save your preset by pressing buttons 1 to 8.

Once you have selected the Address, you can assign a name to the Preset. Using the **Value** knob, you can switch continuously between the different characters. You can also change the character using the 3 and 4 buttons.

To edit the next character, go forward by pressing button 2. If you want to go back to correct or modify any previous character, you can do so by pressing button 1. When finished, press **Save** . You will see the message "*Preset Saved*" on the screen.

If you want to modify a previously stored preset and save it at the same address, when you finish modifying your Preset, press **Shift** + **Bank /Save** , once the Bank indicator is flashing, and then press **Bank /Save** again.

If you want to cancel the saving process just tap **Shift** .

Remember that at addresses 1.1.1 to 1.7.8 store the Factory presets and these cannot be overwritten, but they can be edited and saved in a new address.

MULTITIMBRAL MODE

The *e7* can easily become a multitimbral synthesizer. That is, it allows you to play up to four different sounds at the same time: like playing four synthesizers at once! Enter Multitimbral Mode, press **Shift** followed by button 6 (**Multi**). You will automatically be working on one of the four Parts of a default Multitimbral Patch. To access any of the four Parts, you can do so by pressing **Shift** followed by buttons 1 to 4. Any changes you make to any front panel control will be assigned to the Part you are working on. The only controls that are global (apply equally to each of the four Parts) are the effects and the Stereo Spread and Stereo Motion controls.

Remember that as long as **Shift** is activated (indicated by its corresponding LED), you have control over the secondary controls.

MULTITIMBRAL PRESETS

The *e7* is capable of storing 128 Multitimbral Presets, including 8 Factory Presets.
The Multitimbral Presets can take the Addresses 1.1.1 to 2.8.8.
Factory Multitimbral Presets are located at Addresses 1.1.1 to 1.1.8. As with navigating between Simple Presets, buttons 1 to 8 allow you to navigate between different Positions within the same Bank. You can save your own Multitimbral Presets by following the same procedure as for saving a Simple Preset (Pg. 20).

MENÚ

You can choose different settings for each Part by accessing the Multitimbral Preset Menu. To do so, press the **Shift** key followed by button 5 (**Menu**).
You can configure the operation of each of the Parts: reception MIDI channel, received controls, keyboard zone, etc.
For each of the sub-menus you can edit the Part of interest by pressing any of the buttons 1 to 4.

CH/TRANSP

Channel: reception MIDI channel from selected Part.
In adition to choose channels 1 to 16, you can select:

- **Off**: The Part does not receive MIDI information.
- **All**: The Part receives information from all MIDI channels.
- **Global Channel (GCH)**: The Part receives information on the
MIDI channel chosen in the Global Configuration (Pg. 17).

If you wish to deactivate a Part in a Multitimbral Patch, we recommend that you do so by setting the Part's MIDI receive channel to OFF. This ensures that the Part will not produce any sound while saving polyphony voices.

You can set the MIDI receive channel by holding down the **Mode/ Enter** button and pressing any key on your controller. The **e7** will automatically detect the MIDI channel on which the information was transmitted to. The setting will take effect once you release the **Mode / Enter** button.

Transpose: Transpose the received note within a range of +/- 48 semitones.

PB/CC/AT

You can choose whether or not each Part accepts Pitch Bend (PB), Control Change (CC) and/or Aftertouch (AT).

MIXER

You can adjust the level of each of the four Parts. Select which Part you want to modify by pressing buttons 1 to 4 and adjust the level with the **Value** knob.

KEYBOARD ZONE

You can choose the range of MIDI notes that
each Part receives and/or accepts.
Use buttons 1 to 4 to select which Part you want
to edit. You can then set the lowest and highest
note to be accepted by the Part.
You have two alternative ways to set the note
range:

- By selecting the minimum/maximum note value using the **Value** knob.
  To toggle between the minimum and maximum note, press **Enter** .
- Alternatively, while pressing and holding **Enter** , play a note on the
controller. The edit will take effect once you release the **Enter** key and you
can set the other limit.

VELOCITY ZONE

You can choose the Velocity range that each
Part receives and/or accepts.
Using buttons 1 to 4, select which Part you want
to edit. You can then set the Velocity values to
be accepted by the Part. You have two
alternative ways to configure the Velocity range:

- By selecting the minimum/maximum Velocity value using the Value knob.
  To toggle between the minimum and maximum value, press **Enter** .
- Alternatively, you can hold down **Enter** and play any note with the
  desired Velocity on your controller. The edit will take effect once you
  release the **Enter** key and you can set the other limit.

INITIALIZE

Return the configuration of the Multitimbral Patch you are working on to default
values. By initializing the Multitimbral Mode, only Part 1 is activated as it is the
only one capable of receiving MIDI information (Parts 2, 3 and 4 have their MIDI
Channel set to OFF). If you want to use any of the other three Parts, configure
on which MIDI channel you want each of them to receive MIDI information.

COPY PRESET

You can copy the configuration of a Single
Preset to a Part of a Multitimbral Patch.
Enter the Address of the Single Preset
from which you want to copy its configuration
and then the Part where you want to store it
(using buttons 1 to 4). You will then have the
following options:

> COPY
> 1.1.3
> to
> P3

- **Patch**: copies the Preset's configuration without considering the effects.
- **Patch + FX**: copy the entire Preset configuration.
- **FX only**: copy the effects only.

COPY PART

You can copy a Part of a Multitimbral Preset
into the Patch you are working on.
Enter the Address of the Multitimbral Preset, the
Part you want to copy, and the destination Part.
You will then be presented with the following
options:

> COPY PART
> 1.1.2.P4
> to
> P3

- **Patch**: copies the Part's configuration without considering the effects.
- **Patch + FX**: copy the entire Part configuration.
- **FX only**: copy the effects only.

VOICES

You can select which voices are activated when
setting the Part to either Monophonic or
Polyphonic. The different options are the following:

> Voices P3
> Mono: 3
> Poly: 1→7

Monophonic mode:
- **Free**: any of the voices is chosen randomly.
- **1-7**: a particular voice is used. If this Part is monophonic then the chosen voice will be unavaible for other Parts.

Polyphonic mode:
- **All**: the seven voices are available to use.
- **Even**: even voices are available (2-4-6).
- **Odd**: odd voices are available (1-3-5-7).
- **1 →7**: Assignment is from left to right.
- **7 →1**: Assignment is from right to left.

> A given voice might be available for many Parts, in that case the voice will change its Patch instantly when switching between Parts. This may cause a transient that is rarely audible. If necessary, this can be avoided by assigning different voices to each Part.

> When choosing any of the options above, have in mind that the stereo location of each voice might be different if STEREO SPREAD and/or STEREO MOTION is activated.

CONTROL VOLTAGE (CV)

You can interconnect the **e7** with other synthesizers, sequencers and/or other analog equipment via the Control Voltage (CV) inputs on the rear panel. You can modulate the pitch (PITCH), filter cutoff frequency (CUTOFF) and output level (GAIN).
The pitch control input follows the V/Oct Standard. The cutoff frequency input follows an exponential transfer and the output level input a linear one.

> ⚠ *It is recommended that the input voltage is always in the range of 0V to +5V.*

ESPECIFICACIONES	
Poliphony	7 voices
Multitimbral	4 Parts
Oscillators (2)	Analog, voltage controlled (VCOs) Hard Sync
Wave Shapes	Triangular Saw-Tri Sawtooth Pulse (variable)
Filter (VCF)	24dB/Oct Low-pass filter with resonance control.
Envelopes (2)	ADSR type with keyboard tracking and velocity sensitivity.
LFO (3)	Triangular Ramp up Ramp down Square Sample & Hold
Effects	Delay, Chorus (DSP: 24 bits, 48 kHz)
Presets	640 (512 single + 128 multitimbral)
CV Inputs	Pitch Cutoff Amp Gain
Connections	Audio In (Unbalanced 1/4" TS) MIDI In MIDI Out MIDI Thru L/Mono Audio Output (Balanced,1/4" TRS) R Audio Output (Balanced,1/4" TRS) Headphone Output (Stereo,1/4" TRS) USB
Power Supply	Input: 100-240V ~ 50/60 Hz 1.2 A Output: DC 12V 3A
Power Consumption	12 W
Dimensions	520 mm x 190 mm x 108 mm
Weight	3.75 kg
Dimensions (w/packaging)	620 mm x 290 mm x 230 mm
Weight (c/packaging)	4.5 kg

SUPPORT & WARRANTY

Our products were designed to be highly reliable. However, at **GS Music** we provide support for any inconvenience or doubts.

The **GS e7** synthesizer is warranted against manufacturing defects for a period of one year from the date of purchase. The warranty does not cover damage due to misuse of the equipment. To preserve the warranty, never open the unit.

For support or warranty, please contact us at **info@gsmusic.com.ar**

INDUSTRIA ARGENTINA