

# MegaSynth Operating Manual



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# Introduction

Thank you for your interest in MegaSynth, the premier analog-modeling synthesizer for the Apple® iPhone™/iPod Touch® platform. MegaSynth is the result of our extended research into the digital recreation of the warm analog sounds of time-honored vintage synthesizers. Far from being just a replica, MegaSynth comes with many amenities that make songwriting and performance easy and painless.

Unlike some software synthesizers, MegaSynth is designed to provide as large a range of free variables for sound creation as possible. By this, we wished to create a truly digital analogue to transistor-based synthesizer of the old. Along the way, we have added many new features and "quirks" to MegaSynth's sound to make it a distinct synthesizer--something we hope one may hear in a song and immediately recognize.

You can best harness your MegaSynth by learning how to program new sounds and saving your own presets. This manual is intended to give you a head start in so doing. We hope you will be content with the results.

Thank You,  
James Yonac

CEO & Founder  
Yonac Software

# ***Table of Contents***

- I. Keyboard p. 5
  - A. Selecting a Keyboard to Navigate p. 5
  - B. Navigation p. 5
- II. The Menus p. 6
  - A. Oscillators p. 6
    - i. OSC1 & OSC2 p. 6
    - ii. OSC3 p. 7
    - iii. Oscillator Syncing p. 7
  - B. Filter p. 7
    - i. Cutoff p. 8
    - ii. Peak p. 8
    - iii. Sustain p. 8
    - iv. Resonance p. 9
    - v. Attack p. 9
    - vi. Decay p. 9
    - vii. Release p. 9
  - C. Amp p. 9
    - i. Master Volume p. 10
    - ii. Attack p. 10
    - iii. Decay p. 10
    - iv. Sustain p. 10
    - v. Release p. 10
    - vi. HOLD p. 10
    - vii. POLY p. 11
    - viii. POLYSYNC p. 11
  - D. Modulation p. 11
    - i. LFO1 p. 12
    - ii. LFO2 p. 12
    - iii. LFO3 p. 12
    - iv. SYNC buttons p. 12
  - E. Noise/Glide/Accelerometer p. 13
    - i. Glide p. 13
    - ii. Noise p. 13
    - iii. Accelerometer p. 13
      - a. Pitch p. 14
      - b. Cutoff p. 14
      - c. Matrix p. 14
  - F. FX p. 14
    - i. FX Input p. 15
    - ii. Delay p. 15
    - iii. Mod p. 15
    - iv. Intensity p. 15
    - v. Dry/Wet p. 15
    - vi. Range p. 15

- vii. Speed p. 16
    - viii. Suggested Settings for Common Effects p. 16
  - G. Sequencer p. 16
    - i. Programming a Sequence p. 17
    - ii. Testing a Sequence While Programming p. 18
    - iii. Enabling the Sequencer p. 18
    - iv. Saving a Programmed Sequence p. 18
    - v. Loading a Saved Sequence p. 19
    - vi. Deleting a Saved Sequence p. 19
    - vii. Clearing the Sequencer p.19
  - H. Arpeggiator & Chordmatic p.19
    - i. Turning On/Off p. 20
    - ii. Arpeggiator Basics p. 20
    - iii. Chordmatic Basics p. 20
    - iv. Advanced Settings p.21
  - I. Presets p. 22
  - J. Recording p. 23
    - i. To Record p. 23
    - ii. To Save p. 24
    - iii. Playback p. 24
    - iv. Playing Previously Recorded Files p.24
    - v. Deleting Files p. 24
    - vi. Exporting Audio Files p. 24
    - vii. Importing Audio Files p.25
- III. Other Features p. 25
  - A. Latency p. 25
  - B. Anti-aliasing p.26
- IV. Troubleshooting p. 26
  - A. Networking Issues p. 26
  - B. Clipping p. 27
  - C. Touch p. 27
  - D. Troubleshooting Guide p. 27
    - i. Cannot Install p. 27
    - ii. No sound p. 27
    - iii. Distorted Sound p. 28
    - iv. Cannot Playback Recorded Files p. 28
    - v. Cannot Save Presets or Audio Files p. 28
    - vi. Polyphony Does Not Work p. 28
    - vii. Crashes p. 28
    - viii. Freezes or Interruptions p. 28
  - E. Reporting Issues p. 29
- V. Specifications p. 29

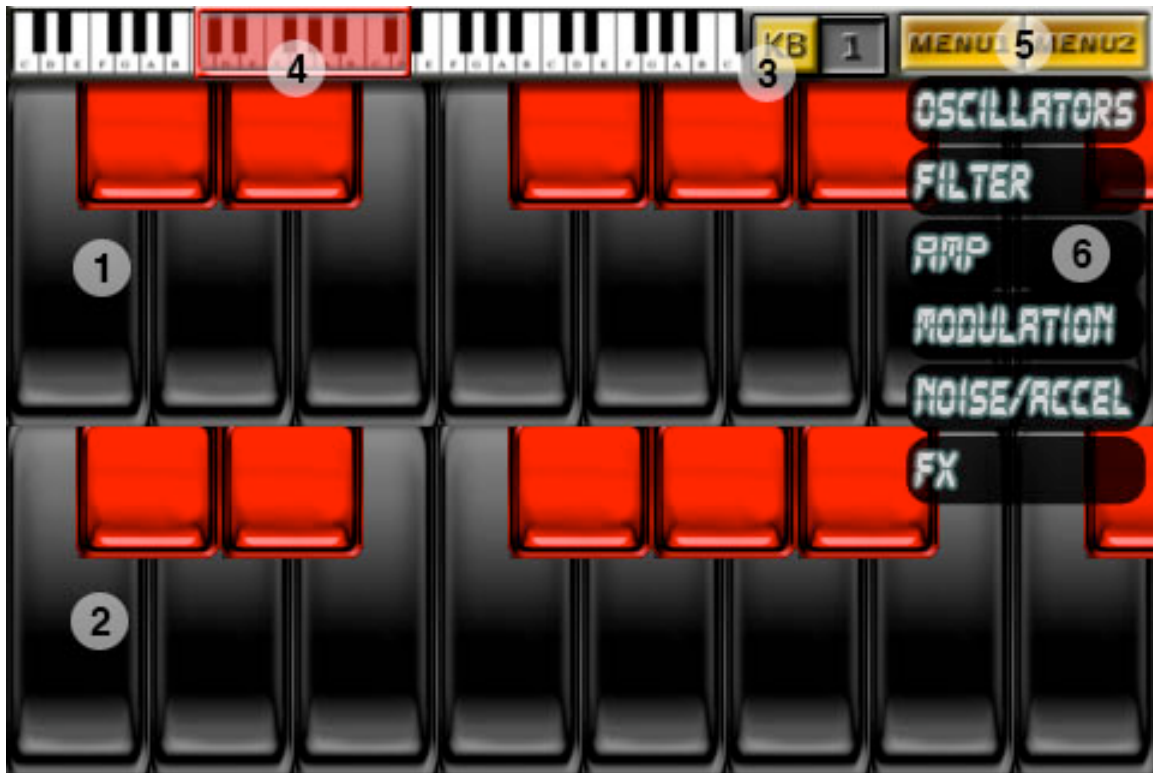
# Part 1: The Keyboard

## Selecting a Keyboard to Navigate

Employ the KB1/2 switch near the upper right corner to select a keyboard. KB1 is the lower, whereas KB2 is the upper, manual.

## Navigation

Use the red slider on the small keyboard spread on the upper dock to navigate to a section of the keyboard you would like to access.



1. Keyboard 1, KB1
2. Keyboard 2, KB2
3. Keyboard Selection
4. Keyboard Range Selection
5. Menu Navigation
6. Menu Selection

## Part 2: The Menus

MegaSynth's features are set through the provided menus. You can navigate the menus by pressing one of the MENU keys and then selecting an item. When finished, you can use the EXIT button to return to the keyboard view.

### Oscillators



1. OSC1
2. OSC2
3. OSC3
4. Wave Form Selectors
5. Range Selectors
6. Volume Sliders
7. Pitch Sliders
8. OSC1, OSC2, OSC3 Sync Button
9. OSC3 Audible LFO Switch
10. Audible LFO Keyboard Syncing

Oscillators provide the basic signal that is sculpted and enhanced in the subsequent stages of sound synthesis. MegaSynth provides three independently configurable oscillators to create a fuller, "fatter" sound, as well as a greater degree of variation in tone. The third oscillator can also be operated in an audible LFO mode.

The factors that manipulate the sound generated by each oscillator are the shape of the wave (or "waveform"), its basic frequency range, its relative pitch, and its volume.

### **OSC1 & OSC2**

Use the selectors for waveform to specify the shape of the audio wave. You can select the basic range by using the range selector buttons: 0 corresponds to the lowest audible tone, whereas 5 corresponds to the highest.

You can fine-tune the pitch for an oscillator by the associated PITCH slider. A

value between -7 and +7 will specify the separation between the frequency emitted by the oscillator and the note assigned to a key in the manuals. You can set the output volume of an oscillator via the VOL slider.

### **OSC3**

Oscillator 3 works in the same way as 1 and 2. In addition, however, oscillator 3 can operate as an audible LFO. To engage the LFO, press the LFO switch. A light will come on. In this mode, oscillator 3 will generate a signal that is in a distinctly lower range than the regular oscillators. You can then adjust the signal factors similarly to regular oscillators.

When SYNC is on, the LFO will be "synced" to the keyboard: i.e., it will oscillate in a frequency related to the depressed key. When it is off, the LFO will oscillate independently of the note being played. This latter is useful to obtain a rhythmic, clicking or buzzing sound that can be found in certain MegaSynth factory presets.

The speed of the clicking/buzzing sound can be adjusted via the RANGE selectors and the PITCH slider.

NOTE: when SYNC is off, the audible waveforms are the following,

- Saw
- Reverse Saw
- 1/2 Pulse
- 1/3 Pulse
- 1/6 Pulse

NOTE: De-syncing the LFO in polyphonic operation is disabled.

### ***Oscillator Syncing***

This feature is enabled when the OSC1, 2 & 3 SYNC button is turned on. It resets the phase of each oscillator with that of oscillator 1. The result is usually a brighter, slightly louder signal. Syncing is automatically done in polyphonic mode of operation to prevent "frequency bleeding." This form of syncing is not to be confused with LFO syncing.

## Filter



1. Cutoff Slider
2. Peak Slider
3. Sustain Slider
4. Resonance Slider
5. Attack Slider
6. Decay Slider
7. Release Slider
8. No-Lift Attack Trigger

Use MegaSynth's filter to sculpt the signal generated by the oscillators module. The cutoff, peak, sustain, and resonance setting affect the timbre of the sound, while the attack, decay, and release settings determine the filtration curve. The No-Lift Attack Trigger button turns on a secondary mode of keyboard operation.

When the keyboard is just engaged, the sound is sculpted in 3 stages: attack, decay, and sustain. When the keyboard is disengaged, the 4th stage of release becomes active.

### **Cutoff**

This is the initial filtration factor when a key is pressed. As its value ranges from lower to higher, the signal can vary from silent (no-pass) to very rich and shrill (all-pass).

### **Peak**

This is the filtration factor at the end of the attack period. The higher values will correspond to a steeper "peak" in relation to the value of the CUTOFF.

### **Sustain**

This is the filtration factor at the end of the sustain stage. Lower values correspond to a "bottom" closer to CUTOFF, while higher values are closer to the

PEAK.

### **Resonance**

This affects the richness of the resulting tone. Lower values correspond to a pure, but slightly amplified tone (which may be liable to clipping), whereas higher values correspond to a more nasal, ringing sound. At higher settings, MegaSynth's filter will start to self-oscillate.

### **Attack**

This is the time allotted for the attack stage: the signal will start at the level specified by CUTOFF and end at PEAK.

### **Decay**

This is the time allotted to the decay stage: the signal will level on the level specified by SUSTAIN.

### **Release**

This is the time allotted to the release stage when the keyboard is released: the signal will finish at the setting specified by CUTOFF.

## **Amp**



1. Attack Time Slider
2. Decay Time Slider
3. Sustain Level Slider
4. Release Time Slider
5. Master Signal Output Slider
6. Keyboard HOLD Mode Switch
7. Polyphonic Mode Switch
8. Polyphonic Voice Syncing

The settings under the AMP menu influence the amplitude behavior of the generated signal, as well as the phonic mode of operating of your MegaSynth.

The attack, decay, sustain, and release (ADSR) settings determine the amplitude curve when the keyboard is just engaged. Each setting works in tandem with the other. You can use this envelope to sculpt MegaSynth's sound, and obtain approximations to other musical instruments, or new sounds of your own.

### ***Master Volume***

This sets the level of the signal output to hardware. Use this to compensate for any clipping or distortion.

### ***Attack***

This is the time allotted to attack: signal's amplitude will peak at the end of this stage.

### ***Decay***

This is the time allotted to the decay stage. After the attack period is over, the signal will be reduced to the level specified by SUSTAIN.

### ***Sustain***

The level at which the signal remains after completing the attack and decay stages. So long as the keyboard is engaged, the level will remain at this, unless no-lift attack trigger has been selected.

### ***Release***

When the keyboard is disengaged, the amount of time that it takes for the signal to reach zero.

### ***HOLD***

When HOLD is turned on, MegaSynth will generate the last note you were playing (in monophonic, sequencer, arpeggiator, PolySync or chordmatic modes) even when you lift your fingers off the keyboard. When in polyphonic mode, it will simultaneously sustain the last few keys that were depressed.

Note that some of MegaSynth factory presets use the HOLD feature. The HOLD feature is also remembered when you save your own presets.

## **POLY**

Turn POLY on to engage MegaSynth's polyphony.

NOTE: Polyphony will be automatically disengaged when you select the sequencer, arpeggiator or chordmatic features. Also, the accelerometer pitch shift and glide will not work with polyphony.

## **POLY SYNC**

Use this setting to obtain a full-syncing of MegaSynth's five polyphonic voices. The result will be a fat and loud sound. The mode of operation will be monophonic, as MegaSynth uses all its polyphonic voices simultaneously to generate output.

NOTE: When poly sync is on, the following will be disabled: accelerometer controlled pitch, glide, audible LFO keyboard syncing

## **Modulation**



1. LFO1: Filter Modulation
2. LFO2: Pitch Modulation
3. LFO3: Amplitude Modulation
4. Wave Form Selectors
5. Range Selectors
6. Volume Slider
7. Pitch Slider
8. LFO Keyboard Sync

Your MegaSynth comes with three modulating LFOs, each of which is dedicated to vary a different element affecting the sound output. You can use these LFOs to vary the timbre, the pitch, and the amplitude of the signal to obtain various effects.

LFOs are set and adjusted similarly to oscillators, enabling you to select waveforms, basic speed of oscillation, fine-tuned pitch, and volume (except for LFO3).

The selected waveform will affect the "shape" of the modulation, resulting in a different modulation effect as a function of time.

The base octave will determine the fundamental speed of the oscillation: higher numbers correspond to faster fundamental speeds.

Pitch allows you to adjust the speed of oscillation more finely within the selected fundamental range. You can especially use the pitch setting to sync to a pre-given tempo, or to create "bounce" effects in tandem with other LFOs

### ***LFO1***

LFO 1 controls the timbre of the generated signal. Use the volume setting to specify how widely the timbre should vary in each period of the oscillation.

### ***LFO2***

LFO2 controls the pitch of the signal. Use the volume slider to set how much the pitch should vary in each period of the oscillation.

### ***LFO3***

LFO3 controls the amplitude of the signal, and could be used as a timed gate or a tremolo.

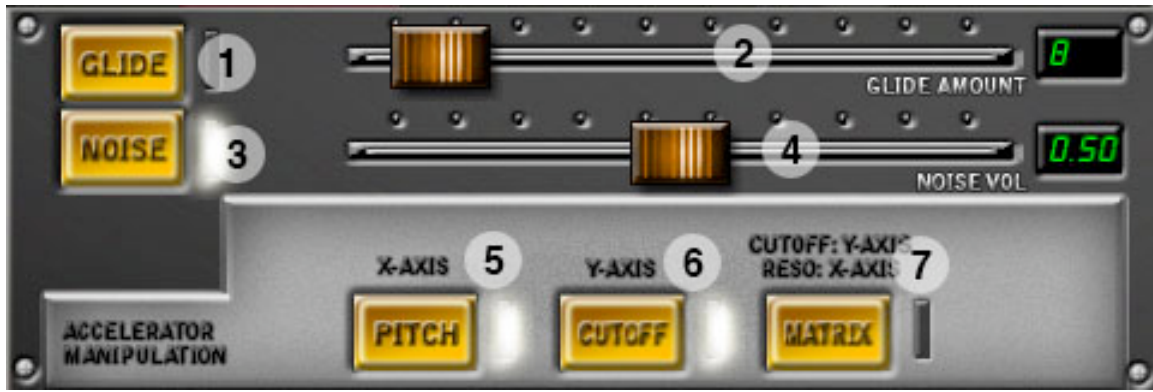
### ***SYNC Buttons***

Use the SYNC button in an LFO to specify whether you would like the oscillations to follow the note you are playing.

When SYNC is off, the LFO will oscillate at a frequency independent of the played note: its speed is specified by the range and pitch settings.

NOTE: LFO syncing is disabled in certain modes of operation.

## Noise / Glide / Accelerometer



1. Glide On/Off Switch
2. Glide Time Slider
3. Noise Generator On/Off Switch
4. Noise Volume Slider
5. Accelerometer Pitch Control Switch
6. Accelerometer Cutoff Control Switch
7. Accelerometer Filter Matrix Switch

### ***Glide***

Use glide to obtain a glissando effect between various notes. **Due to the nature of the glissando effect (it slides from a single note to another), THIS FEATURE IS NOT AVAILABLE IN POLYPHONIC or CHORDMATIC MODES.**

Use the amount slider to select the time it takes to glissando between notes.

You can also obtain unusual "wobbly" effects by using slide in conjunction with the arpeggiator (when chordmatic is off), or the sequencer. In these modes of operation, glide works as a unique sound effect.

### ***Noise***

Use noise to obtain additional sound effects. You can especially employ noise in tandem with the filter or filter modulator to obtain interesting, sweep or jet-like effects.

Noise can be turned on via the NOISE button. Use the associated slider to determine the loudness of noise in the mix.

### ***Accelerometer***

You can use the buttons to enable accelerometer control over such variables as pitch, cutoff or resonance. The accelerometer-controlled pitch will act as a form

of pitch "wheel," whereas the other two features will emulate 1- or 2-dimensional filter matrices.

- **Pitch**

Engaging the button will wire your device's x-axis to the pitch control. The pitch feature is currently available under the following operation modes:

Monophonic  
Sequencer  
Arpeggiator (chordmatic off)

- **Cutoff**

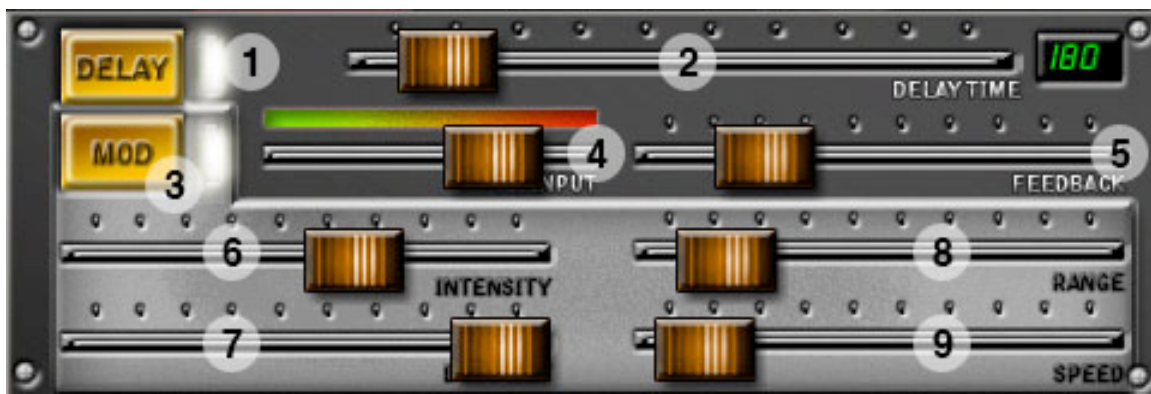
Engaging the cutoff button will wire the y-axis as a cutoff controller. Use this feature to change the timbre of MegaSynth's sound and to obtain wah-like sweep effects.

- **Matrix**

The matrix button will wire the x-axis as a resonance controller, and will automatically engage the accelerometer cutoff control as well. You can use this setting to modulate your synthesizer's tone via motions of your hand.

NOTE: When turned off, the Matrix feature will by default leave the cutoff accelerometer on.

## FX



1. Delay On/Off Switch
2. Delay Length Slider
3. Modulation Effects On/Off Switch

4. Dry Signal Input Level
5. Delay Feedback Amount
6. Modulation Intensity
7. Modulation Dry/Wet Mix
8. Modulation Range
9. Modulation Speed

### ***FX Input***

Use this slider to control clipping caused by the FX module (see Clipping in the *Troubleshooting* section). MegaSynth 1.0.1 and above come with an automatic internal compressor to prevent most FX-related clipping.

### ***Delay***

MegaSynth employs a tape delay-like mechanism to provide an effect somewhere between delay and reverberation. Use the Delay Time slider to control the length of the delay (20 to 2000 milliseconds). You can control the amount of feedback by the eponymous slider.

As a rule, greater amounts of feedback will contribute to a "trippier" but also a muddier sound as delay repeats overpower the dry signal.

### ***Mod***

MegaSynth's modulation settings can be used to create a variety of different sound effects, including flanging, phasing, and chorus.

### ***Intensity***

This adjusts the saturation of the modulation. For dry signals with high amplitude, maximal intensity settings may have a tendency to cause clipping unless compensated for by the FX Input slider.

### ***Dry/Wet***

This adjusts the ratio of the dry vs. wet signal in the final output. When turned all the way up, the output is solely that of the processed signal; conversely, it is completely the dry signal.

### ***Range***

This is used to set the "width" of modulation. Lower settings will provide a warm "warbly" sound, whereas higher settings will tend towards a wide, "jet-like" sweep.

## Speed

This adjusts the speed at which the modulator travels the width of its range.

**Suggested Settings for Common Effects**

Chorus

Intensity: half way through  
Dry/Wet: 3/4 way through  
Range: 1/8 way through  
Speed: 1/8 way through

Phase

Intensity: 3/4 way through  
Dry/Wet: full  
Range: 1/8 - 1/6  
Speed: 0-1/8

Flange

Intensity: 3/4 way through  
Dry/Wet: full  
Range: 1/6 - 1/2  
Speed: 0-1/6

## Sequencer



1. Sequencer Program / Engage Mode Selector
2. Sequencer Step Box
3. Sequencer Timeline Navigators
4. Clear Selector Box
5. Insert Silence
6. Predicate Attack

7. Note Value Selector
8. Save Sequence
9. New Sequence
10. Delete a Saved Sequence
11. Saved Sequence Selectors
12. Tempo Selectors

Your MegaSynth comes with a built-in 24-note sequencer. Unlike most sequencers, MegaSynth's is designed to work by referencing the "root" note, i.e., the note corresponding to the key depressed on a manual. The relations between the notes you have programmed will thus carry over to other root frequencies as well. This allows you to "reassign" a pattern you have programmed immediately, without having to change the notes in the sequencer. E.g., if your sequence has been programmed with notes C1 E1, when you press a key for C, the output will be the corresponding C note, followed by the E note in the same octave. If you subsequently press the G note, it will be G followed by the next B note.

The sequencer allows you to access notes in a two octave + one note range. This is represented by the semi-grey keyboard avatar on the upper menu dock. The default octave (represented by "1" notes) corresponds to the notes in the octave you are using when playing a sequence on the main MegaSynth manuals. Those in the "0" range correspond to the lower octave. You can move "up" in a sequence during performance by fingering the same note, but one octave higher.

The sequencer has two modes: programming and test. When the sequencer is in the OFF state, it is in programming mode. When in ON state, it is in test mode. Leaving the sequencer on the ON state and navigating out of the sequencer area enables the sequencer until it is turned off, or the arpeggiator module is turned on.

The boxes in the sequencer area represent the sequencer timeline. The note in each box is played immediately after that in the previous box. You select a box to edit by pressing on it.

### ***Programming a Sequence***

To start, make sure that the ON button in the sequencer area is off. This indicates that you are in programming mode, where the keyboard functions similarly to the normal MegaSynth keyboard.

Select the box you would like to change by pressing on it. It will be highlighted in red to show that you are currently editing the box. Subsequently, use the keyboard to specify the note for the box. The keyboard is overlaid by note names for convenience.

You can specify the length of the note by using the arrow buttons for NOTE VALUE. Unless the box had previously been assigned a different value, the

default value will be a quarter note.

In sections where you want to insert a silence, use the SILENCE button. When first inserted, this will show the letter "S" in place of a note in the selected box. You can set the length of silence by using the NOTE VALUE selectors.

To clear the selected box, use the red CLEAR button. This will erase all the information on the selected box, and clear its display. Your sequence will always stop at the first clear box.

You can select the tempo at which you want your sequence to play by using the TEMPO buttons.

Use the arrow buttons on either side of the boxes area to navigate the sequencer timeline.

To specify attack for a selected box, use the ATTACK button. This will cause a star to be added to the representation in the box. You can clear the attack for the selected step by pressing the ATTACK button again.

### ***Testing a Sequence while Programming***

You can test a sequence you are programming by pressing the ON button. When the associated light comes on, you can use the sequencer keyboard to hear the sequence in action.

### ***Enabling the Sequencer***

Press the ON button to turn the sequencer on. Then EXIT to the MegaSynth keyboard view, or a menu of your desire. The sequencer will be active.

NOTE: The polyphonic mode will not be available when the sequencer is turned on.

### ***Saving a Programmed Sequence***

You can save a sequence by pressing the SAVE button. Specify a name for your sequence by using the default keyboard, and press DONE when finished. Your sequence should appear on the SAVED display screen.

Always save a sequence that you think you will use in the future. If not saved, the sequence will be automatically erased during shutdown, or when you select a new sequence from the SAVED menu.

IMPORTANT: if you are using a sequence in tandem with a preset you wish to save, please make sure that the sequence is saved BEFORE the preset is

saved.

### ***Loading a Saved Sequence***

Use the buttons for SAVED to select among the saved sequences.

NOTE: always use the SILENCE button to insert a gap between notes in a sequence, and never the CLEAR button. The sequencer will always stop and loop at the first clear box in a progression. To ensure no unexpected results, make sure that no clear boxes appear among the notes of your sequence. A box is clear if no musical note icon or other representation appears in it.

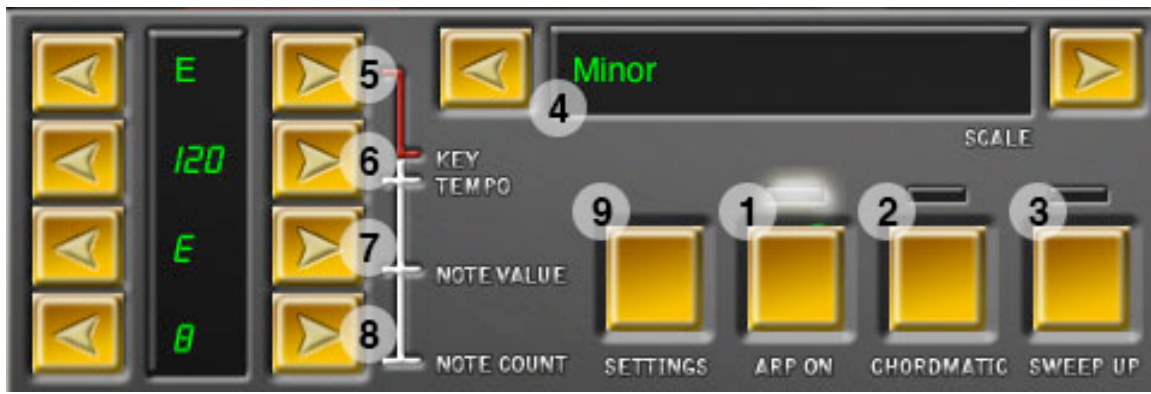
### ***Deleting a Saved Sequence***

Press DEL to delete a sequence. You will be prompted to confirm deletion. You cannot delete the sequences that your MegaSynth has come with.

### ***Clearing the Sequencer***

You may wish to clear the sequencer to "start from scratch." For this, use the NEW button. This will clear the information in all the boxes, and provide a blank timeline.

## **Arpeggiator and Chordmatic**



1. Arpeggiator Module On/Off
2. Chordmatic Feature On/Off
3. Sweep Up Toggle
4. Scale Selector and Display
5. Key Note Selector
6. Tempo Selector
7. Note Length Selector
8. Note Count Selector
9. Display Settings Menu

MegaSynth comes with a unique arpeggiator and chord-maker feature to create a wide variety of sounds. Both the arpeggiator and the Chordmatic offer numerous musical scales that let you create and configure sweeps, chords or arpeggios. MegaSynth's arpeggiator will build the correct sequence or chords for each note in the scale and key you have selected, so as to allow you to play progressions within that scale. When turned on, the Arpeggiator/Chordmatic module will place an overlay of dots on MegaSynth's manuals, indicating the notes in the scale you have selected.

### ***Turning On/Off***

The arpeggiator module's master switch is ARP ON. When turned on by itself, it engages the arpeggiator. To engage the Chordmatic, you must first turn on the arpeggiator module via ARP ON, and then turn on the CHORDMAKER switch. Turning on the CHORDMAKER switch alone will not enable the arpeggiator.

### ***Arpeggiator Basics***

To build an arpeggio, you can select a musical scale and a key. You can then adjust the tempo, as well as the value (length) and the number of notes in a sweep. Currently, MegaSynth allows up to 8 notes to be played in a sweep.

Use the buttons at SCALE to choose a scale. Use the buttons at KEY to select the key in which you want your arpeggios. The note values are set via the associated pair of buttons. Here are the abbreviations for the available note values and their corresponding lengths,

- W = Whole Note
- H = Half Note
- Q = Quarter Note
- E = Eights Note
- S = Sixteenths Note

You can then set the number of notes in a sweep by using the buttons at NOTE COUNT.

Engage the arpeggiator by pressing the ARP ON button. Make sure that the CHORDMATIC button is turned off, as this will engage the Chordmatic when the arpeggiator is on.

### ***Chordmatic Basics***

Chords are built within the selected scale, using the components specified in the arpeggiator settings menu. You can start by selecting a musical scale and key as in "Arpeggiator Basics." Use the NOTE COUNT selectors to specify the number of voices you would like in a chord. MegaSynth allows you between two and five

voices, inclusive.

To further edit your chords, press the SETTINGS button to access the arpeggiator settings area. Using the COMPONENT selector buttons, you can specify the second and third voice in each chord. Typically, chords in the major and minor scales are built by using the 3rd and 5th components. In MegaSynth, the first component of a chord is always the root, i.e., the note corresponding to a key on the keyboard.

When more than 3 voices are specified, MegaSynth will repeat the root and second components at a different octave, providing fuller-sounding chords.



1. Arp/Chord Component Selectors
2. Scale Sweep Toggle
3. Triplet Toggle
4. Arp/Chord Inversion Toggle

### **Advanced Settings**

- SWEEP UP

Use this to invert the direction of an arpeggio, or the voices in a chord. When turned on, arpeggiator will work in "upsweeps," whereas the Chordmatic will construct chords starting from higher notes in a scale.

- SCALE

When turned on, the arpeggiator will sweep the active musical scale. The Chordmatic will use adjacent notes in a scale to form chords.

- TRIPLETS

Turn this switch on to time the notes as triplets within the tempo specified on the main arpeggiator screen.

- INVERT

You can use this feature to "invert" the first component in a sweep or a chord for obtaining a different "feel."

NOTE: The tempo setting on the arpeggiator area is universal: any alterations will automatically be reflected on the tempo setting in the sequencer area.

## Presets



1. Bank Selector and Display
2. Preset Selectors
3. Save Preset
4. Edit Preset
5. Rename Preset
6. Delete Preset

MegaSynth allows you to save an unlimited amount of presets under its "User Presets" bank. The remaining banks contain factory presets that the program comes with.

Use the upper two arrow buttons to navigate among banks, and use the lower buttons to select among presets.

To save a new preset, press the SAVE button. iPhone's default keyboard will appear, allowing you to name your preset. When finished, click DONE on the keyboard. If you wish to cancel, press CANCEL on the upper left-hand corner.

NOTE: When saving presets that use a sequence you have written, please ensure that you have saved the sequence prior to saving the preset. For instructions about saving sequences, please see the *Sequencer* section.

You can also edit presets you have saved (factory presets cannot be edited; however, see below). To do so, press EDIT: when the light comes on, press SAVE, and the changes will be registered. When finished editing, either press

EDIT again (the light should turn off), or select a different bank/preset.

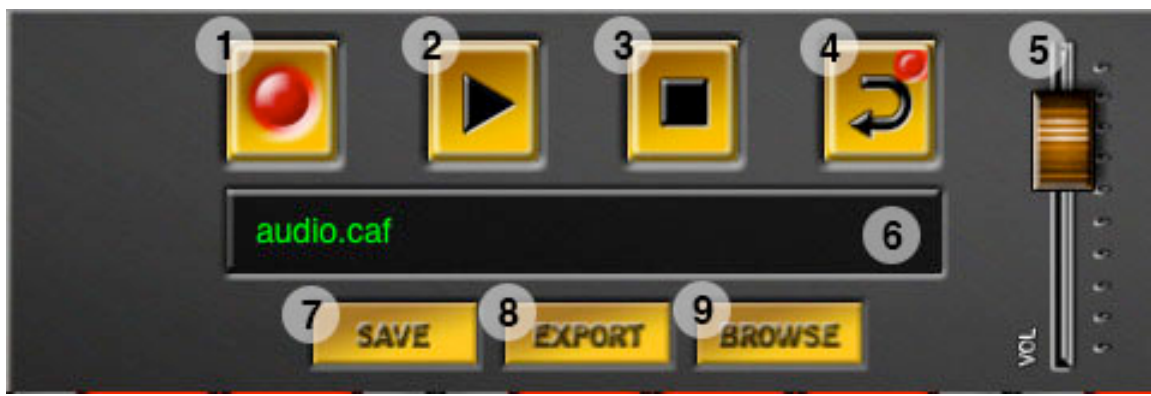
To rename your presets, press RENAME. Use the default keyboard to enter a new name, and click "DONE" (on the keyboard) when finished.

To delete a preset, press DEL. You'll be given a prompt. If you wish to proceed, press OK. If not, press CANCEL.

Although you cannot edit factory presets, you can save a copy to the User Presets bank by pressing SAVE while at the preset. You can then proceed as in saving a regular preset. Once in the User bank, you can now edit the preset as you wish.

NOTE: Tempo and Master Volume settings are not recorded by MegaSynth, as these usually vary depending on the performance circumstances.

## **Recording**



1. Record Arm Button
2. Play/Start Record Button
3. Stop Playback Recording Button
4. Loop Playback Toggle
5. Playback Volume
6. Audio Filename Display
7. Save Newly Recorded Audio
8. Export / Import Audio Files
9. Browse Audio Files on Device

MegaSynth comes with a recording module that lets you record, play, accompany, delete, import, or export sound files.

### ***To Record***

First arm the recorder by pressing the REC button. A red light should start blinking: this tells you that the system is ready to start recording. You can

disengage the recorder at any time by pressing the REC button again, or by pressing the STOP button.

To start recording, press PLAY. The red light should now become solid. When finished, press STOP. The title "audio.caf" should appear on the display screen.

**IMPORTANT:** Unless you otherwise intend, you must save a recording you have just made. Otherwise, it will automatically be erased when you make a new recording, or quit the application.

### ***To Save***

Press the SAVE button: MegaSynth will automatically give a numeric name to your file and store it in your device.

### ***Playback***

You can play a file you have just recorded by pressing PLAY. For loop playback, use the LOOP button. When the loop mode is on, a small red light should appear on the LOOP button.

### ***Playing Previously Recorded Files***

Use the BROWSE button to access MegaSynth's audio file browser. Select the song you wish to play. You will reach an info screen that displays the file's name, length and recording date. You can use PLAY and STOP buttons to audition the file without leaving the info screen. Press LOAD to load the file into the recording module in the main MegaSynth section: its name should appear on the recorder display.

### ***Deleting Files***

Use BROWSE to access the info screen of a file you wish to delete. Then, use DEL to delete the file. You will be prompted whether you really wish to delete the file.

### ***Exporting Audio Files***

You can export or import previously recorded files via a Wi-Fi LAN connection and a computer with a web browser. To start, please ensure you are in the area of a network to which both your device and computer have free access (your computer does not have to be connected via Wi-Fi, but must be in the same network). Also ensure that you have a strong Wi-Fi connection on your device via the connection strength indicator on your device's home screen.

When ready, press EXPORT. In the new screen, wait until the indicator "Wi-Fi

Syncing is Off!" appears. This will alert you that your phone can read the presence of a nearby network (in busy networks, it may take a few seconds until this happens).

Subsequently, press the ON/OFF switch to connect to the network. When successful, the "Wi-Fi Syncing is Off" message should be replaced by a local IP address, for example

http://192.168.2.6:4098

Leave the ON/OFF button on the ON position, and DO NOT press BACK. On your computer, launch your web browser, and enter the IP address as displayed on your device's screen. You should then access a page that lists all the files contained in the MegaSynth application. Download any file you wish by right-clicking on its link and choosing "save as..." on your browser (MAC users also can Option-Click on a link). Depending on the speed of your local connection and the size of the file, the transfer may take a few minutes to complete.

When finished, return the ON/OFF slider to the OFF position, and press the BACK button.

### ***Importing Audio Files***

You can also import audio files to play on your MegaSynth. MegaSynth has been tested on the following file formats:

<ul style="list-style-type: none"><li>.mp3, 128 - 192 kbps</li><li>.wav, 22050 and 44100 KHz</li><li>.caf, 22050 and 44100 KHz</li><li>.AAC, 128 - 256 kbps</li></ul>
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To import, follow the instructions in the "Exporting Audio Files" section. Once you have accessed your device through your computer's web browser, click the UPLOAD button at the bottom of the web page. Navigate and choose to a compatible sound file on your computer. Depending on the speed of your local connection and the size of the file, the transfer may take a few minutes to complete.

## ***Part 3: Other Features***

### ***Latency***

MegaSynth is a powerful synthesizer designed to work with a combination of Apple iPod and iPhone devices and software. The processing power and available resources in these devices may differ. To ensure the best user experience, MegaSynth comes with a user-adjustable latency setting as found in

some computer software synthesizers. Its operational principles are the same: you can use the latency setting to obtain an ideal balance among hardware-related latency, sound quality, and smooth operation.

For older devices with less processing power, it is suggested that latency be set at least 1/2-way through. This is especially important for users who employ MegaSynth's more advanced features, such as recording, polyphony or sound effects, in tandem with more complex playing.

For newer devices, you can vary the latency setting according to the response you get from MegaSynth. If there are any unwanted interruptions during a performance (when you are not browsing the MegaSynth modules or presets), you may wish to re-set latency to a slightly higher level.

As a rule of thumb, monophonic mode of operation demands less processing power than polyphony. Hence, latency can be varied according to your preferred mode.

### ***Anti-Aliasing***

MegaSynth comes with an anti-aliasing feature, designed to remove unwanted frequencies from "rich" waves. You can set this feature on and off by using the associated option in MegaSynth settings under your device's main setting menu.

## ***Part 4: Troubleshooting***

### ***Troubleshooting Networking Issues***

If the export module gets stuck at the message "Initializing...", make sure you have access to a network. If the network has a password, make sure you have previously stored it in your computer.

If your device gets stuck at either the "Initializing..." or "Wi-Fi Syncing is Off!" message, ensure that your firewall isn't interfering with your iPhone or iPod Touch connection. If the issue persists after disabling the firewall, shutdown MegaSynth and reboot your device. Ensure your device isn't on Airplane setting, and that your local network is accessible by going to your device's general "settings" menu.

If you are having difficulty accessing the phone via your browser, ensure that your computer is also connected to the network. Also ensure that there isn't any interference by any software or hardware firewall. If you are using an unusual browser, try accessing via Firefox, Internet Explorer 6 or above, or Safari.

Depending on the bandwidth and usage, your network may have times of "slow" connection. In these cases, it may take a few minutes to transfer files.

### ***Clipping***

Clipping occurs when the amplitude of the generated sound exceeds the limitations of the hardware. This is manifested as a distinct crackling distortion sound. It is an artifact of analog subtractive sound synthesis. MegaSynth is designed with algorithms to reduce clipping as a function of the features selected and the mode of operation. However, there could still be situations when the hardware is overloaded and clipping occurs.

To compensate, MegaSynth offers two level controls:

- Master Volume (Menu1 -> Amp)
- FXLevel (Menu1 -> FX)

Use Master Volume to adjust the overall amplitude of the processed signal. Master Volume controls the final output level of the generated sound, and is useful for managing clipping in most situations.

Use FXLevel slider to control the level of the dry signal arriving at the FX module. This is useful to cope with clipping that occurs when effects are added to an otherwise clean signal.

### ***Touch***

Your device is designed to "track" five points on its screen, with a sixth automatically disengaging the screen, and leaving the device in an "as-is" state. Accordingly, MegaSynth comes with a safeguard that cuts off the sound and releases its keyboard and controls, in case a sixth finger comes in contact with the screen.

### ***Troubleshooting Guide***

- Cannot Install

Please ensure that you have a compatible device (see "System Requirements"). Also make sure that you have updated to an operating system version 2.1 or greater, and that you have enough space. Rebooting your device may also help.

- No Sound

Please ensure that your iPhone/iPod Touch's volume setting is at an audible level. If you are using an iPhone, please ensure it is not at the

"vibrate" or silent setting. Also make sure that the oscillators are on, and are set at an audible level. Check the Master Volume setting (MENU1 -> AMP) and FX Input (MENU1 -> FX) if you are using sound effects. Re-launch the application if necessary.

- Distorted Sound

Please adjust the Master Volume setting (MENU1 -> AMP) or FX Input (MENU1 -> FX). See the section "Clipping" for more information.

- Cannot Play Back Recorded Files

Please ensure that the playback volume is at an audible level (MENU2 -> RECORDING). If you are using a file not recorded by MegaSynth, ensure that it is one of the compatible formats. See *Recording* for more information.

- Cannot Save Presets or Audio Files

Please ensure that your device has enough available space to store files. Shut down MegaSynth and reboot your device.

- Polyphony Doesn't Work

By design, operation in following modes is monophonic: sequencer, arpeggiator, Chordmatic, and PolySync.

- Crashes

Try rebooting your device. Under MegaSynth settings in your device's general settings menu, make sure that anti-aliasing is turned off, and that latency is about 1/2 way through. If you do not have the latest software update, please obtain it from Apple.

If the crash occurs when you are attempting to export/import files via Wi-Fi, ensure your device's network settings are correct. Ensure that you are not prevented by a network firewall.

If the problem persists, re-install your application, first making sure that it is synced, and that a copy is available in your iTunes®. Please do not delete your application if you don't have a copy backed-up in iTunes.

- Freezes or Interruptions

Freezes or interruptions may occur when your MegaSynth is set at a latency level lower than one your device can tolerate. Readjust your

latency setting. Try to use MegaSynth with all sound effects and polyphony turned off. If the issue is cleared up, you should select a more suitable latency setting to operate with the resources of your device.

### ***Reporting Issues***

If your problem still persists, please file a bug report by sending an email to [support@yonac.com](mailto:support@yonac.com), citing:

- The model of your device
- The operating system version
- The stage at which the crash occurs
- The bank/preset at which the crash occurs, if available
- Any other information that you think is helpful

## ***Part 5: Specifications***

- Sound Generation
  - 3 independent Variable Frequency Oscillators
  - 5-note optional polyphony
  - Retro monophonic control mode
  - 7 waveforms per oscillator
  - Adjustable pitch and volume
  - 3rd oscillator as optional LFO
  - Oscillator syncing
  - Noise generator with mix volume
  - Optional anti-aliasing
- Sound Sculpting
  - True-retro Variable Capacitance Filter with self-oscillation
  - Cutoff/Resonance
  - Full ADSR filter envelope
  - No-lift trigger mode
  - VCA ADSR envelope
  - Adjustable glide (available in monophonic modes only)
- Modulation
  - 3 Dedicated LFOs for filter, pitch and amplitude
  - Independent key-syncing for each LFO
  - 7 carrier waveform per LFO
  - Independently adjustable pitch and volume (where applicable)

- FX
  - Tape-delay clone with adjustable feedback
  - 20-2000 ms range
  - Modulation with,
    - Intensity
    - Wet/Dry Mix
    - Range
    - Speed
  - Obtain chorus, flanging and phasing FX thru modulation
  - FX input level slider to control overload
  - Auto FX saturation guard (v. 1.0.1+)
  
- Accelerometer
  - Pitch-wheel assigned to x-axis
  - Cutoff assigned to y-axis
  - "Matrix" to control cutoff and resonance simultaneously (y- and x-axes, resp.)
  
- Sequencer
  - 24-note, root-pitch, easy-to-program step sequencer
  - Limitless user-savable sequences
  - Tempo setting
  - Dedicated sequencer programming and test keyboard
  - Per-note attack option
  
- Arpeggiator/Chordmatic
  - Triad 8-note arpeggiator
  - Up to 5-voice chordmaker
  - 23 musical scales
  - Tempo
  - Configurable second and third chord/arp components
  - Triplets option
  - Up/down sweep
  - Scale sweep option
  - 3rd formant inversion
  
- Presets
  - 209 factory presets in 8 banks, ranging from basses to retro to the downright odd; also included are 30 preset sequences
  - Limitless user-savable presets
  
- Recording
  - Record MegaSynth and export via Wi-Fi LAN connection
  - Arm-then-record for faster response
  - Loop playback for accompaniment

- Accompany prerecorded music, including mp3 files (uploaded via Wi-Fi)
- Built in basic file management

### **Contact Us**

**You can contact us with any technical issues, questions or suggestions at [Support@yonac.com](mailto:Support@yonac.com)**